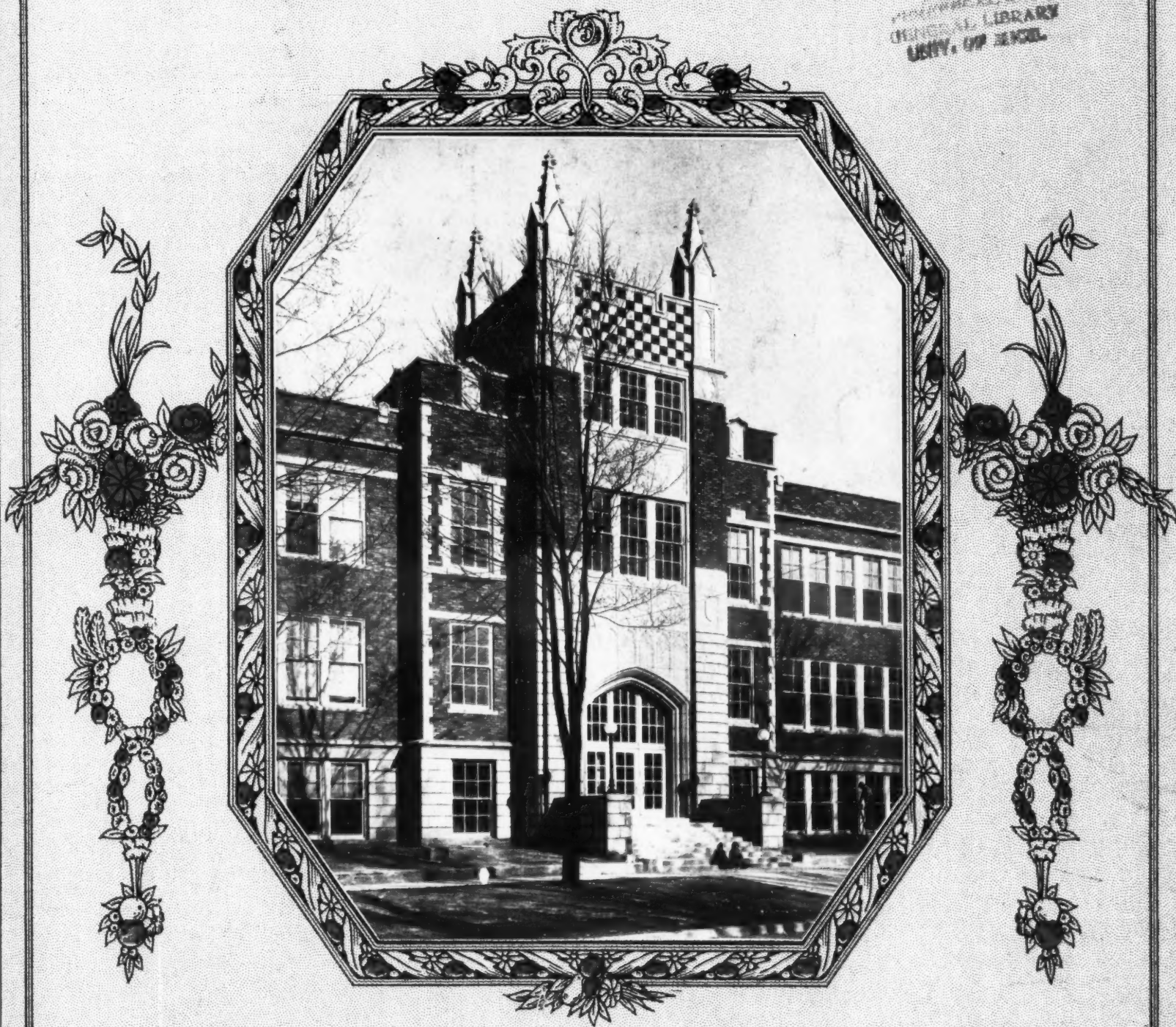


THE AMERICAN APR 1 1929
School Board Journal

A PERIODICAL OF SCHOOL ADMINISTRATION

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April-1929

THE BRUCE PUBLISHING COMPANY
MILWAUKEE, WISCONSIN



JUST THE CLOSET FOR SCHOOLS

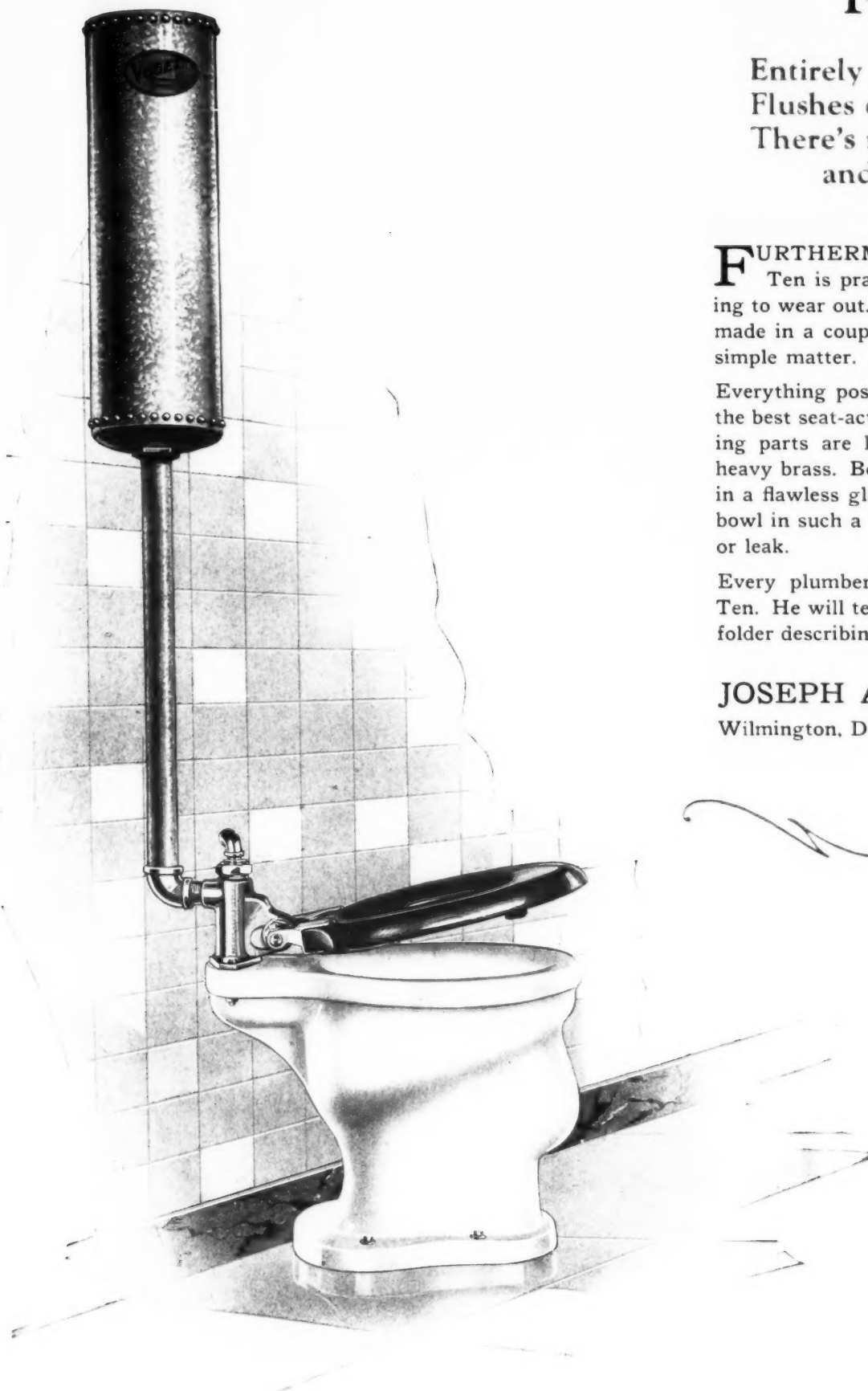
Entirely automatic
Flushes every time
There's no forgetting —
and no hand operation is
required

FURTHERMORE, the **VOGEL** Number Ten is practically trouble-proof, with nothing to wear out. Any adjustment required can be made in a couple of minutes. Re-washing is a simple matter.

Everything possible has been done to make this the best seat-action closet in the world. All wearing parts are high grade bronze. Castings are heavy brass. Bowl is fine grade of china, finished in a flawless glaze. The valve is attached to the bowl in such a way that it will never come loose or leak.

Every plumber knows the **VOGEL** Number Ten. He will tell you of its quality and give you a folder describing it completely, or write us direct.

JOSEPH A. VOGEL COMPANY
Wilmington, Del. St. Louis, Mo.



[**VOGEL** PATENTED *Products*]

"Pyramid" Natural Slate Blackboards Outlast the Building



Above:- Wedging out huge blocks of slate for "Pyramid" Blackboards.

Don't be
with "just



misguided
as good"!

THERE is nothing as good as a natural product when quality is important, and when blackboards are purchased, quality is certainly the first consideration.

The solid, fine texture of a "Pyramid" natural slate blackboard has always been first choice, for its permanency, ideal writing surface, and superiority cannot be denied.

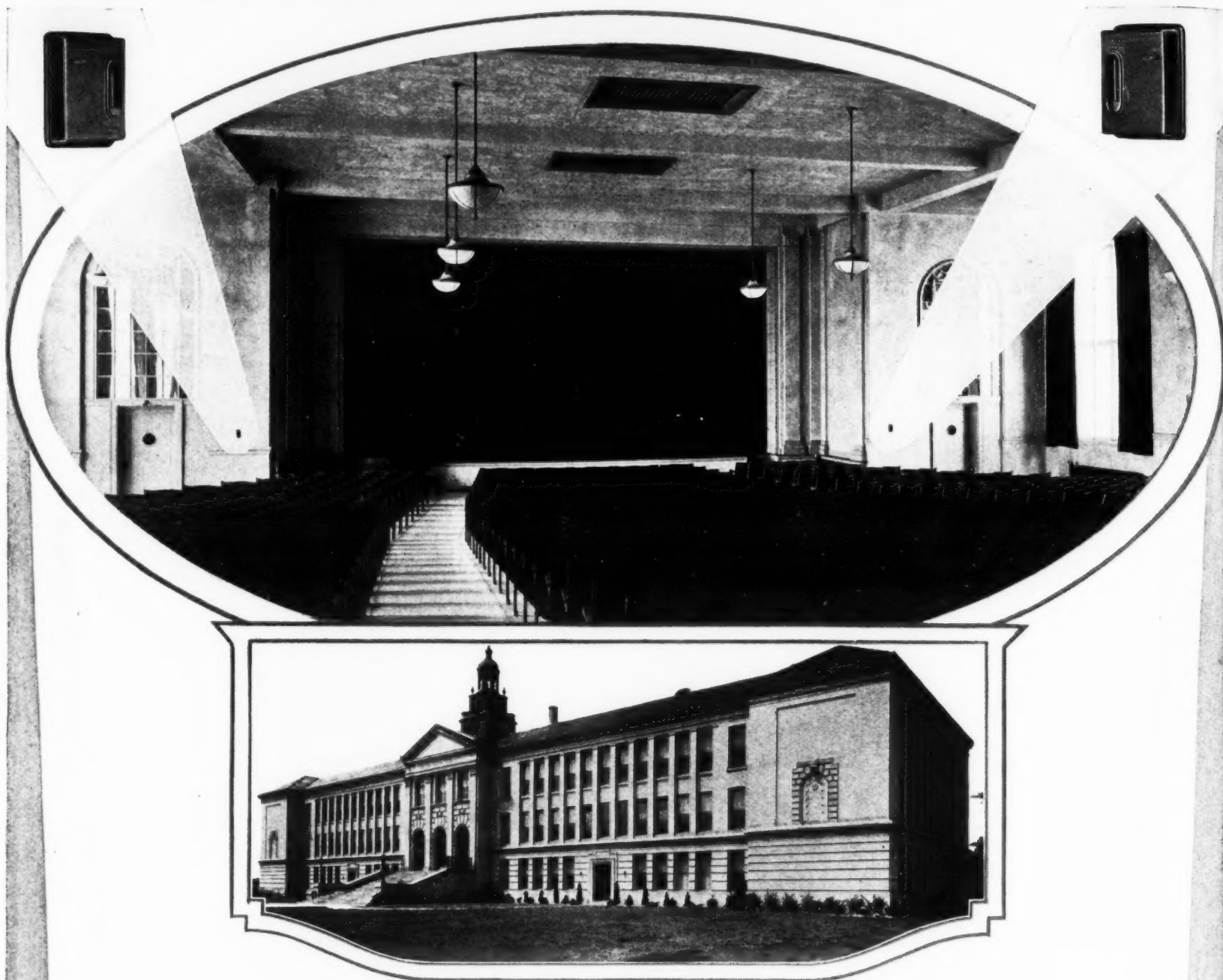
The secret of its unanimous endorsement does not lie just on the surface for a natural slate board

is the same all the way thru. That's why they give centuries of service. There is no fear of warping or cracking from water or heat. There is no surface to wear off that will give annoyance and result in replacement. When they are installed they are there to stay. For your own good and for the betterment of your school, write today for two interesting and carefully edited books, giving drawings, specifications and information on blackboards and a story of the quarrying of slate.

Natural Slate Blackboard Co.



440 ROBINSON AVENUE, PEN ARGYL, PENNSYLVANIA



Auditorium View And Exterior Of Kibler High School,
Tonawanda, N. Y. Fully Equipped With Johnson Heat &
Humidity Control. Edw. B. Green & Sons, Buffalo, Arch.

WHEN you specify Johnson Heat And Humidity Control you include Johnson SERVICE — guaranteed assurance of total reliability and perfect results permanently. The word *service* in this company's name applies to the installation of Johnson Heat And Humidity Control by no one other than Johnson Service Company engineers and mechanics. It includes the company's regular inspection and attentive interest in the

"I wish to thank you for the courteous, prompt treatment which you gave our recent request for service. The entire matter was handled to our satisfaction. Our relations with your firm have always been absolutely satisfactory. Your system has given us A No. 1 service."

John B. Coleman, Director,
LaCrosse Vocational Schools, LaCrosse, Wis.

installed apparatus as long as it exists. It embraces the benefits and advantages which are derived from The Johnson System, and which the foregoing strict

supervision assures efficient performance of the apparatus after installation is made and the gratifying results secured.

JOHNSON SERVICE CO.,
MILWAUKEE, WISCONSIN.

ESTABLISHED IN 1885. BRANCHES IN
ALL PRINCIPAL CITIES.

JOHNSON HEAT & HUMIDITY CONTROL

THE ALL METAL SYSTEM.
THE ALL PERFECT GRADUATED OPERATION OF VALVES AND DAMPERS.

THE DUAL THERMOSTAT
NIGHT & DAY CONTROL
..... FUEL SAVING
25 TO 40 PER CENT

KEWANEE

Water Heating GARBAGE BURNERS

The By-Pass (a distinctive Kewanee feature) prevents the garbage from smothering the fire—the flames circulating thru it and around the garbage until the refuse is dry enough to burn.

Every building must have hot water, and the most economical method of getting it is by using rubbish and garbage as part of the necessary fuel.

Here is a real Kewanee Product—solidly built of steel, riveted. A water-heating garbage burner as strong and dependable as Kewanee Boilers.



Three types—fourteen sizes to heat from 200 to 2600 gallons per hour

Catalog 75 gives details

KEWANEE BOILER CORPORATION

Kewanee, Illinois

Branches in 40 Principal Cities

STEEL HEATING BOILERS RADIATORS WATER HEATERS
TANKS AND WATER HEATING GARBAGE BURNERS

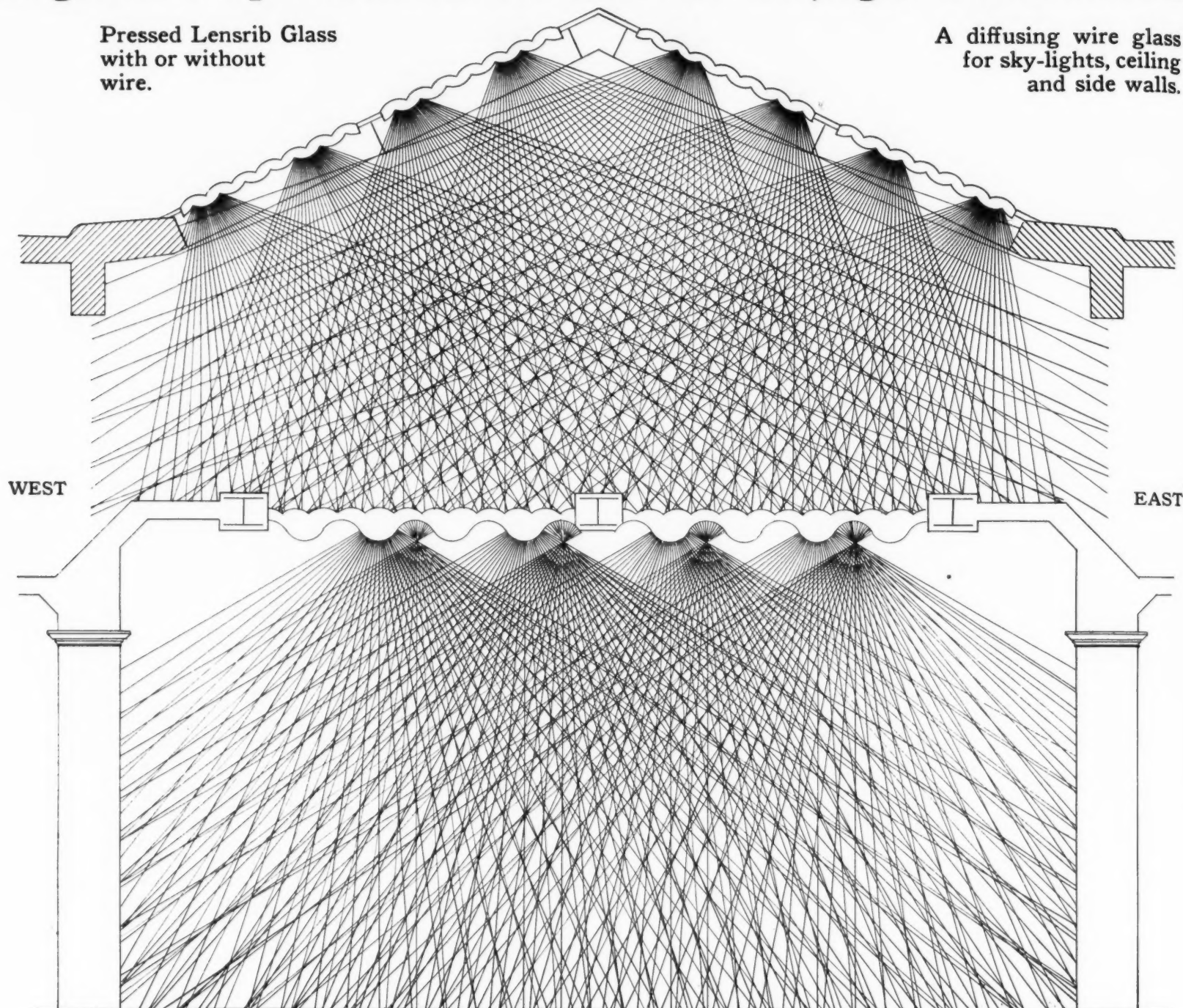


D-89

Engineer's Specification for Interior Daylight Illumination

Pressed Lensrib Glass
with or without
wire.

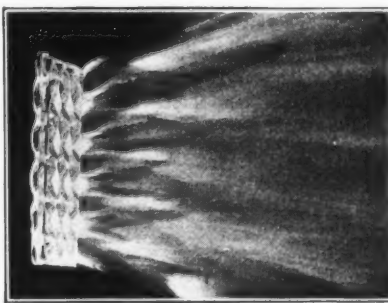
A diffusing wire glass
for sky-lights, ceiling
and side walls.



PRESSED LENS RIB WIRE GLAZED IN SKY-LIGHT AND CEILING.
(Rib enlarged in respect to lenses.) A. Hardoncourt, Eng.

It is quite possible to increase the daylight illumination from your sky-lights, ceilings, and other sash, 50 to 100 per cent as measured in foot candles by using the Lensrib pattern. A shadowless light even is possible by the use of sufficient glass area. Such calculations are based upon the following factors:

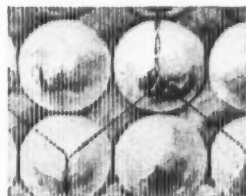
1. No loss from reflected light.
2. Gets the vertical light.
3. Highest possible transmission.
4. Maximum diffusion or re-directed light passing through.
5. No glare.
6. Self-cleaning surface, perfect cleanliness.
7. Heat dispersion.
8. Fracture resistance.
9. Conceals the light spots from reflectors.



ACTUAL PHOTOGRAPH OF
REDIRECTED LIGHT BY
PRESSED LENS GLASS.

These essentials are not matched by any other glass because the structure of Lensrib was designed to function covering features Nos. 1, 2, 3, 4, 5, 6, 7, 8, 9, by expert laboratory skill for the express purpose of increasing daylight illumination. Successfully used in many schools, laboratory buildings, science halls, libraries, classrooms, high grade industrial plants, gymnasiums, etc. Especially adapted to ceilings in art galleries. Conceals light spots from reflectors. We guarantee or money refunded.

HOW TO SPECIFY: All sky-lights, side walls, ceilings, and other openings, are to be glazed with Lensrib Wire Glass as shown on plans and specifications, which product is made by the Manufacturers Glass Company, First National Bank Building, Chicago, Illinois; this glass shall be glazed with lenses on the exterior and ribs underneath, so that any condensation may be drained by the rib channels.



LENSRIB WIRE GLASS

Further details and information supplied upon request.

MANUFACTURERS GLASS CO.

CHICAGO

1702 First National Bank Bldg.

NEW YORK CITY

551 Fifth Avenue.

Stocked by leading jobbers everywhere. — Factory, Sergeant, Pa.

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LENSRIB GLASS

The tremendous waste of heat which would occur in utilizing Vesuvius to boil a kettle of water illustrates the heat losses resulting from insufficient heating surface in a boiler. The Pacific design puts the maximum of heating surface in direct contact with the maximum of fire area.

A tea kettle over Vesuvius



A tea kettle over Vesuvius is an appropriate symbol for unscientific ratios between direct heating surface and boiler grate area. A pan of water only half covering a gas flame is another. Lack of sufficient heating surface means fuel thrown away.

Engineering authorities, in stating the correct ratio as 30 to 40 square feet of heating surface per square foot of grate area were not actuated by whim. They *tested* and tested *again* to find the point of highest efficiency in boiler heat transmission. And it is at this point that the heating surface in the Pacific is fixed.

Likewise, ratios between direct and indirect heating surfaces are standard in Pacific design and construction. The engineer, the architect, the builder are *guaranteed* in the Pacific a heating efficiency as high as cold mathematics and expert brains can make it.

Correctly balanced heating surfaces form one of the reasons for Pacific's dominance in the heating industry. Others are its large combustion space, positive circulation, and its rugged welded construction, the latter being Pacific's own contribution to the heating industry.

Write or wire for literature on the type of installation required for your next job. A Pacific will fit it.

PACIFIC

STEEL HEATING BOILERS

AND CAPITOL RADIATORS MAKE A LOGICAL COMBINATION



PACIFIC STEEL BOILER CORPORATION

Factories: Waukegan, Ill., Bristol, Pa.

Sales Offices in 58 Cities

Division of the United States Radiator Corp., Detroit, Mich.

Von Duprin

Self-Releasing Fire Exit Latches

Sweets, Pages B2605-B2609

ALA 27c5

Sturdiness and reliability are not particularly interesting virtues--but they are indispensable in time of emergency.

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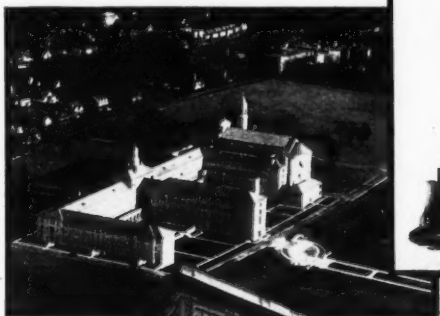
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HARDWARE CO.
Indianapolis, Ind.



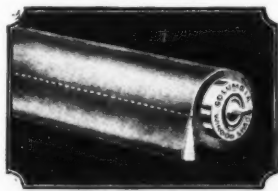


Administration Building (above). One of the many buildings of the Philadelphia General Hospital equipped with *Columbia* Window Shades and Rollers. Architect: Philip H. Johnson; General Contractor: Kober Construction Co.

Seminary of St. Charles Borromeo (below). Arch.: Hoffman-Henon Co., Contractor: McCloskey Co. Photo © Aero Service Corp.



City Center Building. Architects: Rouse & Goldstein of New York; General Contractors: Irwin & Leighton of Phila.



Send for your copy of
"Window Shades"

This interesting book tells all about window shades, window shade rollers, roller brackets, and approved methods of hanging window shades and suggests the most suitable type of shade for each kind of building. It also contains the useful "Standard Specification for Window Shades." For your copy mail the coupon to The Columbia Mills, Inc., 225 Fifth Avenue, New York City.

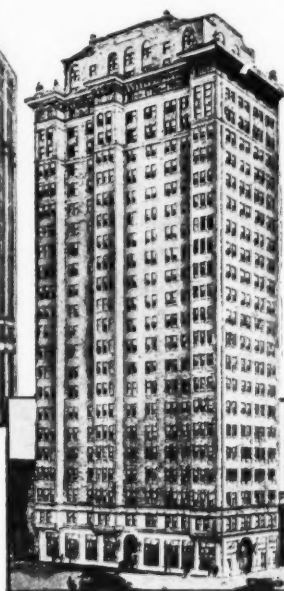
Name.....
Street.....
City..... S 4-29

Pennsylvania R. R. Office Building. (Shown directly below). Architect: Penn. R. R. Architect; General Contractors: Irwin & Leighton.



Philadelphia Public Ledger (at the left) Architect: Horace Trumbauer; General Contractor: Doyle & Company.

Chancellor Hall (below). Philadelphia's new giant apartment. Architect: Arthur W. Hall; Contractor: F. V. Warren Co.



PHILADELPHIA'S O. K.

In every window in sight—*Columbia* Window Shades.

Yet the six or seven thousand window shades installed in the outstanding buildings shown above actually represent only a small fraction of *Columbia's* Philadelphia total. In scores of important hotels, hospitals, schools and public buildings—in hundreds of private homes—these long-wearing good-looking window shades are rendering quiet, efficient service.

And this statement holds good of practically any large city in the country.

The *Columbia* Mills, Inc.

225 FIFTH AVENUE, NEW YORK

Baltimore Boston Chicago Cincinnati Cleveland Dallas
Detroit Fresno Kansas City Los Angeles Minneapolis
New Orleans Philadelphia Pittsburgh Portland (Ore.) St. Louis
Salt Lake City San Francisco Seattle

Columbia

GUARANTEED

WINDOW SHADES and ROLLERS

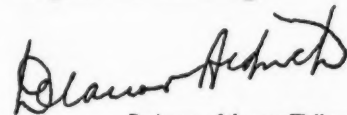
The GREATEST ARCHITECTS say

"For minimum upkeep cost use

COPPER, BRASS and BRONZE"

From the greatest architects in the country come unqualified endorsements of Copper, Brass and Bronze. Wherever maximum service at minimum upkeep cost is desired, the use of these rust-proof metals is recommended. For the construction and equipment of school buildings they are, by long odds, the logical materials to use.

"—iron may last ten years and may give out in three years; Copper and Brass ought to last as long as the building."



Designers of the new Wall and Hanover Building, New York

"When one considers how very little more Copper and Brass now costs, it seems very foolish economy to gamble with the rust troubles that so often occur when corrodible metals are used."



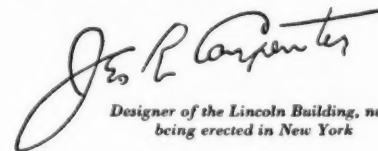
Designer of the Bush Building New York

"We favor the use of Copper, Brass and Bronze materials wherever possible, because experience has shown that ultimately they prove to be the most economical."



Designer of Library Building, University of Washington

"When one considers the years of rust-free service that Copper and Brass give, their slightly higher initial cost seems a very small item indeed."



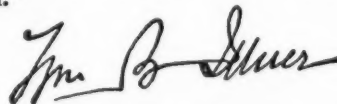
Designer of the Lincoln Building, now being erected in New York

"Even when Copper and Brass were very much more expensive than they are today, we recommended them to our clients as proving a real economy in the long run."



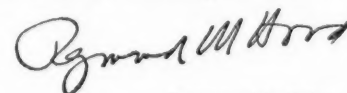
Designers of the Industrial Trust Building, Providence, R. I.

"Although they cost a little more in the beginning, Copper, Brass and Bronze invariably prove a real economy in the long run."



Nationally known school architect and designer of the Continental Life Insurance Company Building in St. Louis

"There are no repairs of a building more annoying or more costly than those that are necessitated by rusting metals."



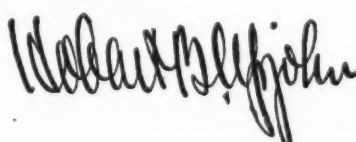
Designer of the Tribune Tower, Chicago

"Copper and Brass are accepted as practically standard equipment in all buildings where permanency is a primary requisite."



Designers of the New York Times Office Building

"There is no question that where permanency is the paramount consideration, Copper, Brass and Bronze materials become essential."



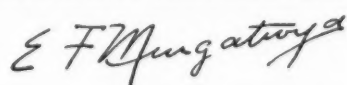
Famous designer of churches throughout the country

"We have used and are using a great deal of Copper, Brass and Bronze in our work, thereby avoiding deterioration and making our buildings as nearly permanent as possible."



Designers of the Kansas City Life Insurance Company Building

"The use of Copper, Brass and Bronze in buildings today is getting more and more common and we feel that in the near future they will entirely supplant the ferrous metals wherever corrosion is to be contended with."



Designer of Allerton Houses in New York and Chicago

OUR Building Service Department will be glad to work with you on all problems pertaining to the uses and proper application of Copper, Brass or Bronze in school construction.

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COPPER, BRASS, BRONZE—The World's Most Useful Metals

Boiler Repairs Eliminated

**\$1596 Fuel Saved
in Four Months**



PLAISANCE HOTEL, CHICAGO
Heated by Heggie-Simplex Smokeless Boilers
Architect: Robt. S. De Golyer & Co., Chicago
Heating Contractor: Suburban Heating Co., Berwyn, Ill.

The Plaisance

-Apartment Hotel
On the Midway
at Jackson Park
CHICAGO

June 30, 1928

Heggie-Simplex Boiler Co.,
Joliet, Ill.

Gentlemen:

The results obtained from the two Boilers purchased from you recently are very gratifying.

We have something that we can depend upon. We were continually repairing the four sectional Boilers formerly used - putting in new sections or welding them. It was seldom that the four were in working order at the same time. The repairs on them amounted to from \$500 to \$1,200 a year. But what seemed worse was the fear of breaking down at each cold snap, and a gang of steam-fitters working all night at double time. Now we have assurance of steam and there are no repairs.

During the first four months - January, February, March and April - we saved with the Heggie-Simplex Boilers 228 tons of coal. In the same period of the previous year with the other boilers we burned 599 tons of coal. With Heggie-Simplex Boilers we used only 371 tons - a saving of 228 tons at \$7.00 a ton or \$1,596.00.

Yours very truly,

Geo. Paradee
Treasurer.

The same reliable and economical boiler performance is available for your building. Take advantage of Heggie-Simplex savings now. For latest catalog write Heggie-Simplex Boiler Company, Joliet, Illinois.

Representatives in principal cities
-telephone and address listed
under "Heggie-Simplex Boilers."

HEGGIE-SIMPLEX

STEEL HEATING BOILERS



THE STUDENTS
AT THIS OUTSTANDING
HIGH SCHOOL

"SWIM IN DRINKING WATER"



Recently Completed COLUMBIA HIGH SCHOOL
South Orange-Maplewood School District
GUILBERT & BETELLE, Archts. Maplewood, New Jersey

Not only has the Columbia High School a fine swimming pool but it is equipped with a modern recirculating system and W&T Chlorine Control Apparatus. Every drop of the swimming pool water is chlorinated—and the water in the pool will be as pure as drinking water.

Hundreds of school pools throughout North America are equipped with W&T Chlorine Control Apparatus.

At the recent convention of the American Public Health Association in Cincinnati, resolutions were adopted calling upon health workers everywhere to promote swimming pool sanitation in accordance with the Joint Report of the Public Health Engineering Section and the Conference of State Sanitary Engineers.

That report states: "... the addition of chlorine ... by the use of proper apparatus is ... the most satisfactory method of swimming pool disinfection."

Competent engineers are available at each of our offices to discuss swimming pool sanitation with those interested.

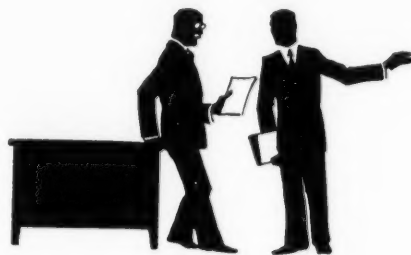
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NEWARK, NEW JERSEY

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It is free and given willingly

NOW that vacation time is near, you are considering what attention your school building needs. Let Sonneborn help you!

For many years Sonneborn engineers have studied how to preserve school buildings; what materials to use; how to apply them as economically as possible. We save your time, save money and assure satisfactory results. When you deal with Sonneborn you deal with experts of long experience in school building upkeep.

A Sonneborn representative will call in response to the coupon below. He will not be concerned about the size of your repairs, for we are as much interested in small jobs as in large ones. If you decide to use our products, we will welcome your order, but you will be under no obligation.

Send the coupon and have a representative call who understands school upkeep. He will give you sound counsel on the sensible, economical thing to do.

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that renew your building on a lasting basis

LAPIDOLITH concrete floor hardener will make your concrete floors permanently wearproof and dustproof. No more unhealthy dust. No more depreciation.

CEMCOAT is a special paint that stays white after other paints turn yellow. Can be applied to plaster, concrete, brick or wood. Used for hallways, auditoriums, etc.

LIGNOPHOL preservative floor dressing will keep your wood floors from splintering, rotting or drying out. This treatment lasts for years.

SONOTINT is a special, flat, washable, wall finish for classrooms. Easy on eyes. Has no lustre. No poisonous ingredients. Dirt wipes off without marring finish.

Mail coupon for representative to call

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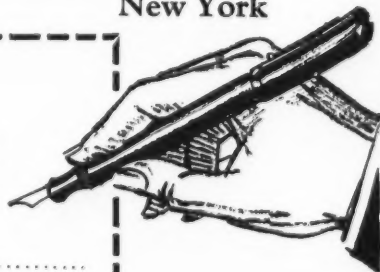
L. SONNEBORN SONS, INC.,
114 Fifth Ave., New York

Without incurring any obligation, I would like to talk with your representative about school building renovation.

Name

Address

SBJ-4





A Style for Every Need
 Each with Extra-Heavy Bowl. . . .
 The Simple Madden Valve.
 And Clow Sure-Scouring Action

THERE are more than 48 styles and sizes of Clow Madden Automatics. No other closet approaches them for completeness.

All Clow Madden Automatics carry the extra heavy Adamantose bowl—weighing as high as 60 pounds—far heavier and stronger than the average. Moreover, this twice-fired Adamantose ware absorbs no stains, shows no cracks or checks.

The heart of any closet is the valve. The Madden

Valve has no weights or contraptions. It can't forget to flush. When the seat is down the closed top tank fills—when the seat raises with the user—the Madden Valve lets loose a cleansing flood of water.

And, because of the well-designed bowl interior, every part from rim to trap receives an equally high pressure flush.

Clow Madden Automatics guard health, guard costs, as no other closet can.

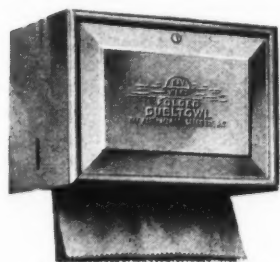
James B. Clow & Sons, 201-299 N. Talman Avenue, Chicago

CLOW MADDEN AUTOMATIC
Forty-Eight Styles, Heights and Types to Meet Your Requirements



Confidence!

We all like to flash our colors when we know we're right. It's natural. Then, you'll see our point. We know that Bay West Towels are the finest towels you can buy for school use. So we want to prove that we're right by having you try them in your own washroom. We'll furnish the towels free. Mail the coupon.



Dubltowls are the fastest-drying paper towels in existence. Served 2 sheets at once. Twice the usual number per case.

Singltowls, served one sheet at a time, give you a high-grade service at low cost.



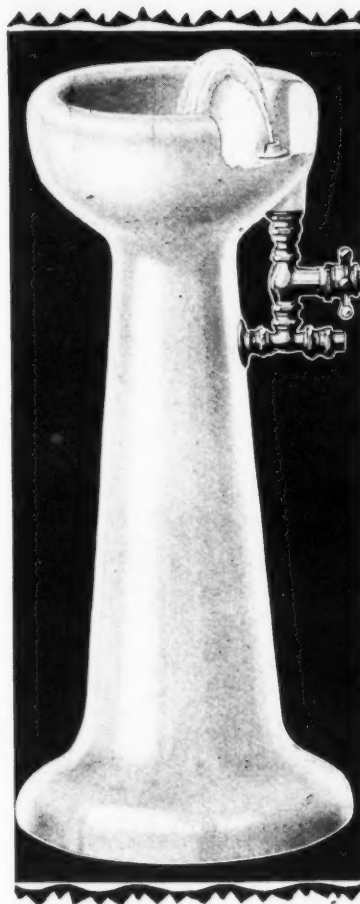
Kraft Paper Towels

BAY WEST PAPER CO.,
Green Bay, Wis.

BAY WEST PAPER CO.,
Green Bay, Wis.

Gentlemen: Please send me a De Luxe Dispensing Cabinet and several packages of Bay West All-Kraft Towels, both types, for free trial. (Carrying charges prepaid. No obligation involved.)

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Address.....
City.....
State.....
School.....



Satisfy Thirst Sanitarily

WHEREVER Rundle-Spence drinking fountains are installed, the thirst of all is satisfied sanitarily. It's bound to be, because lips cannot touch the R-S nozzle—the slight slant stream prevents water from falling back upon the jet.

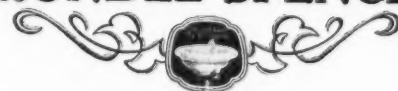
Let us give you complete information covering R-S Sanitary Drinking fountains, besides our line of Bath and Plumbing Fixtures and Supplies.

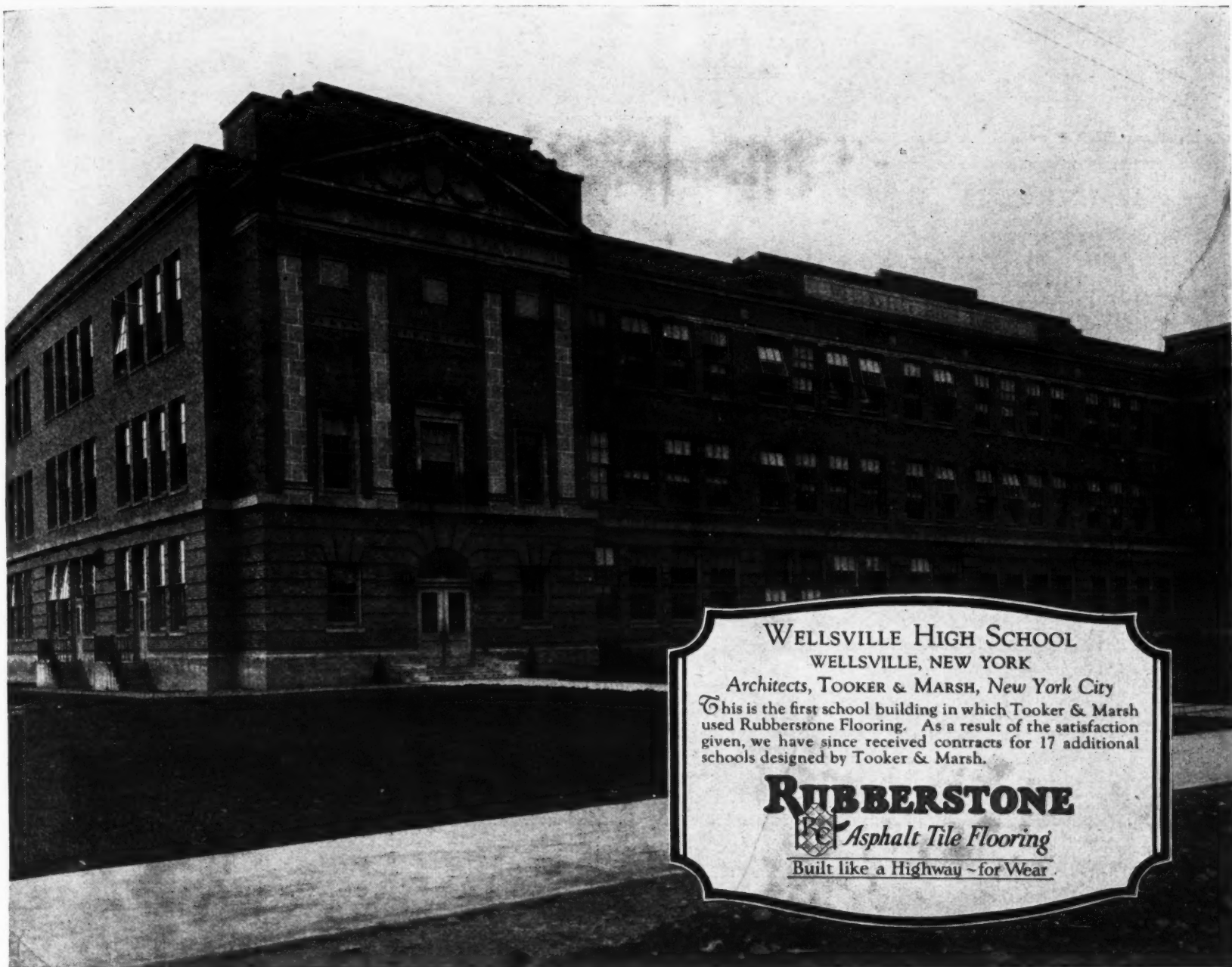


Rundle-Spence Mfg. Co.

51 - Fourth Street
MILWAUKEE, WIS.

RUNDLE-SPENCE





WELLSVILLE HIGH SCHOOL
WELLSVILLE, NEW YORK

Architects, **TOOKER & MARSH**, New York City

This is the first school building in which Tooker & Marsh used Rubberstone Flooring. As a result of the satisfaction given, we have since received contracts for 17 additional schools designed by Tooker & Marsh.

RUBBERSTONE

Asphalt Tile Flooring

Built like a Highway - for Wear

What will the 10-year Cost be?

Judging flooring only by its installation cost is often a near-sighted economy. If repairs or replacements are frequent, the true cost will mount considerably.

Check the durability of the material, the permanency of installation methods, its performance record in other schools. Calculate the probable 10-year cost!

If you will do this, you will certainly specify RUBBERSTONE. In addition to low installation cost, no other flooring can show so convincing a record of service rendered in schools.

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Asphalt Tile Flooring

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Building, 6th and Main

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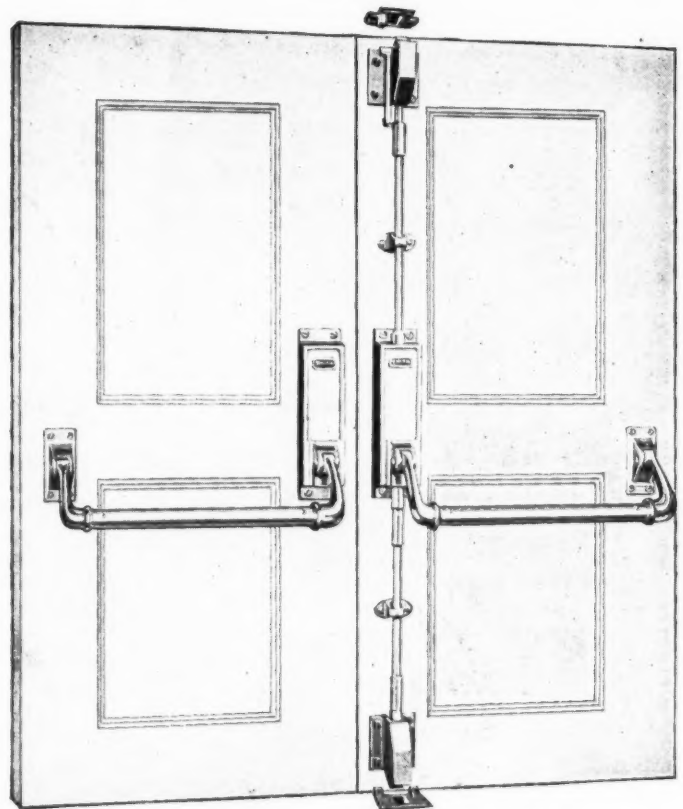
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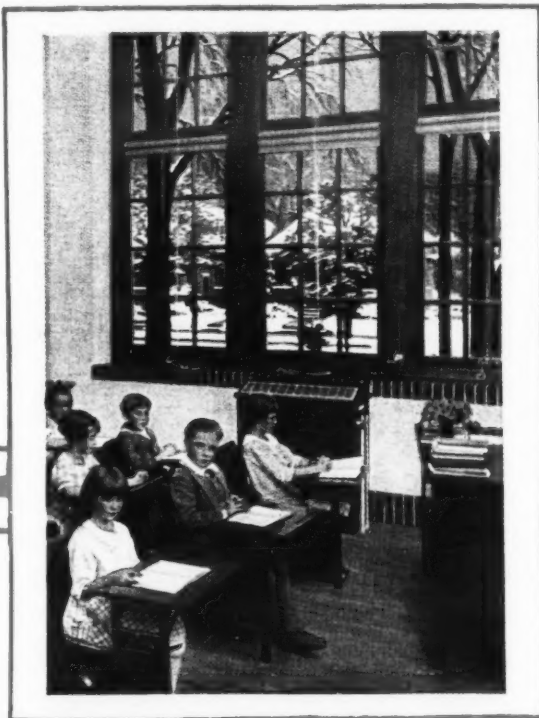
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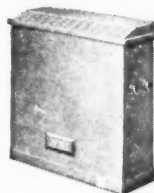
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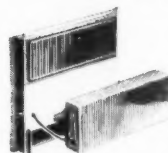
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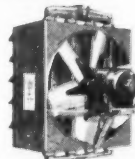


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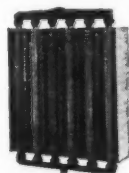
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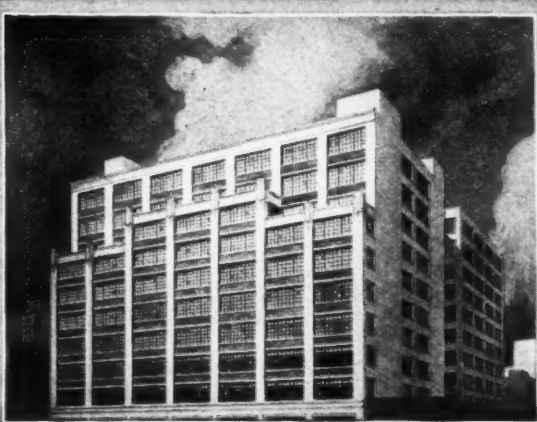
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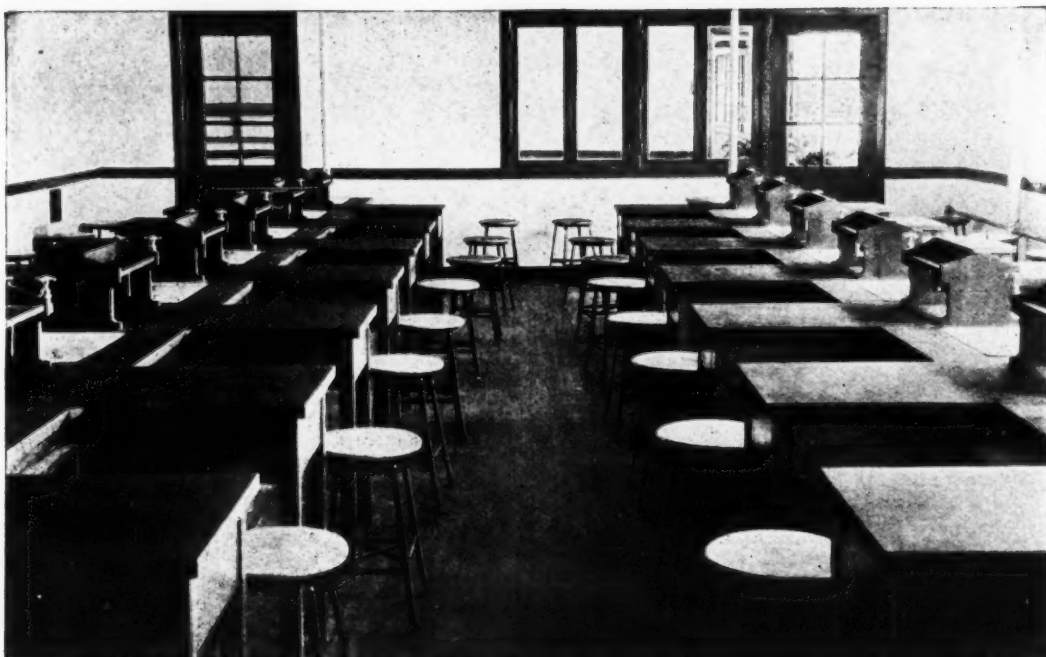
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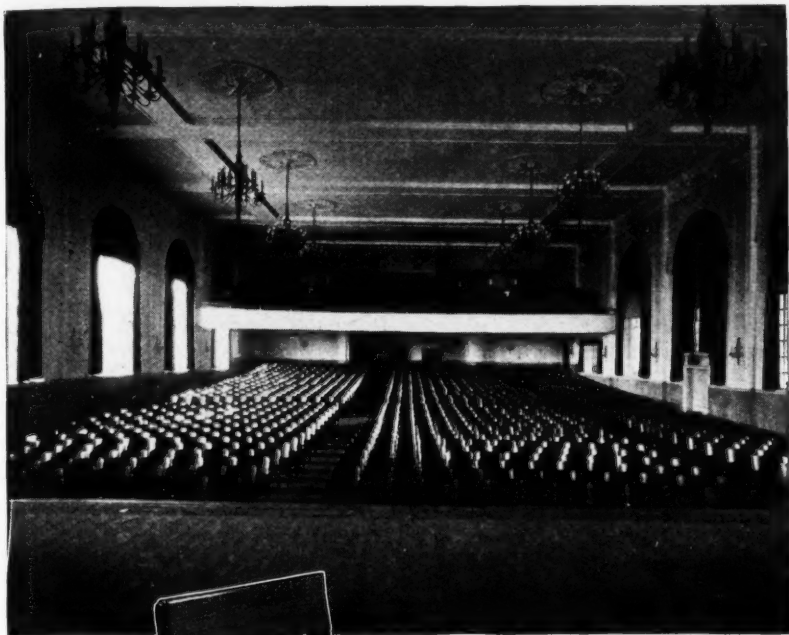
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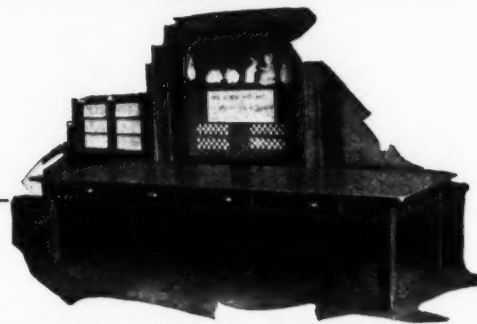
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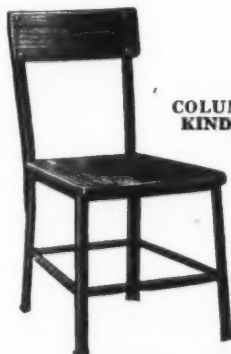
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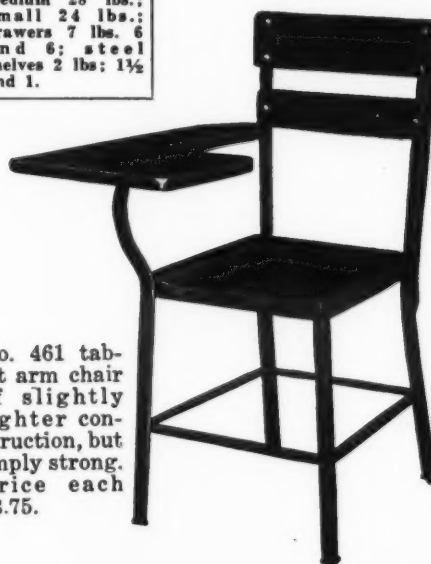
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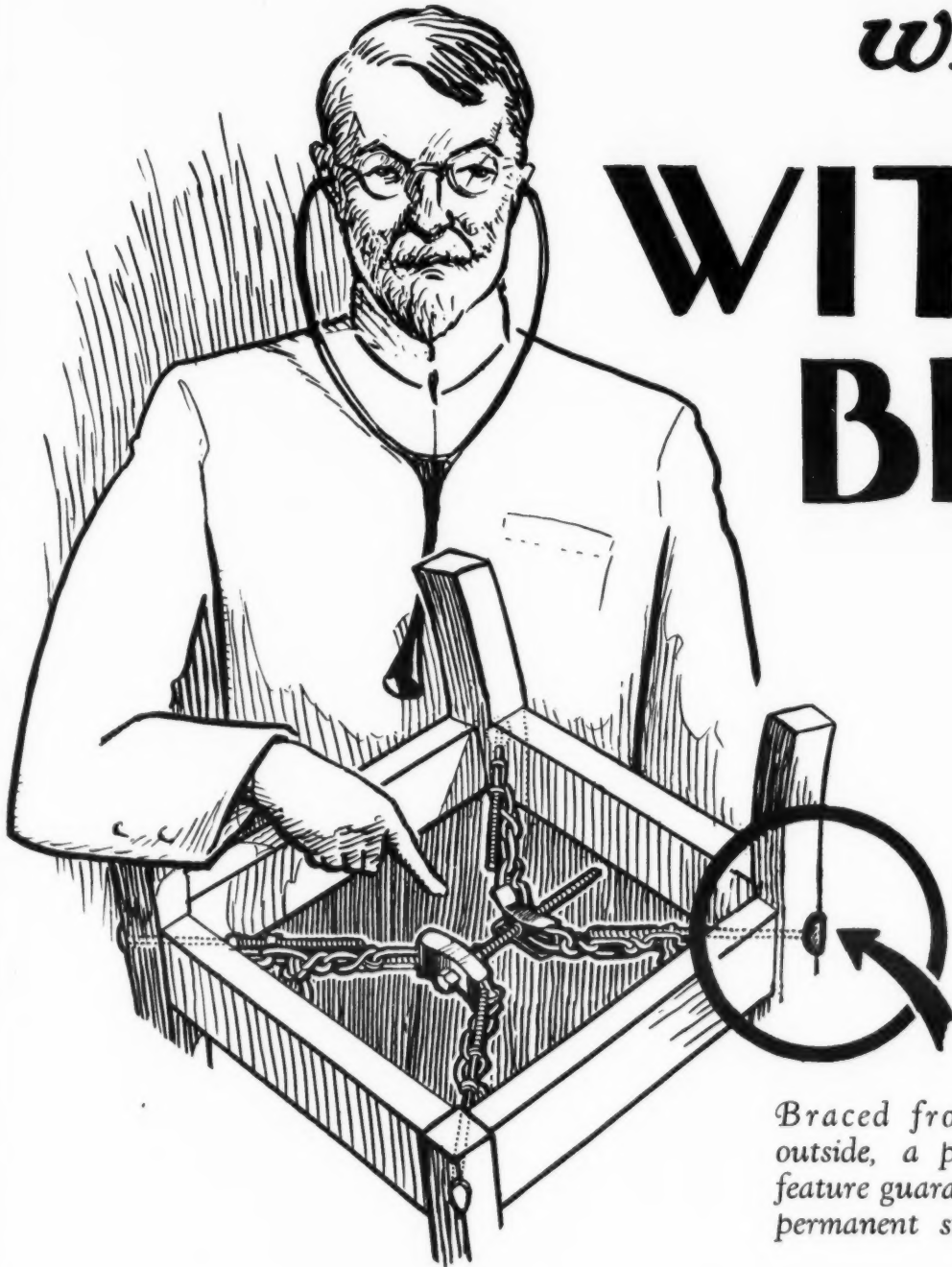
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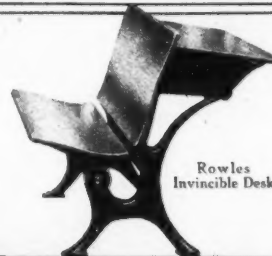
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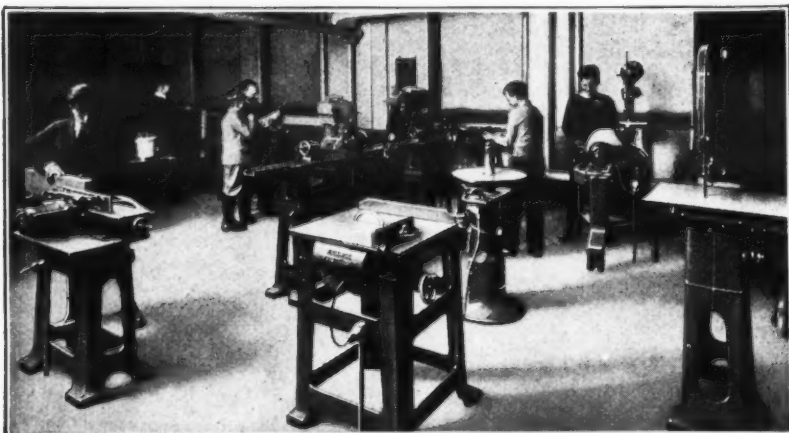
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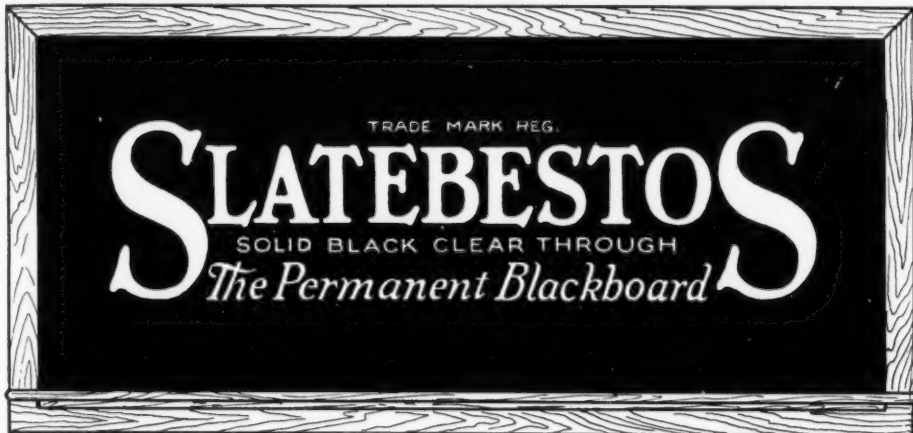
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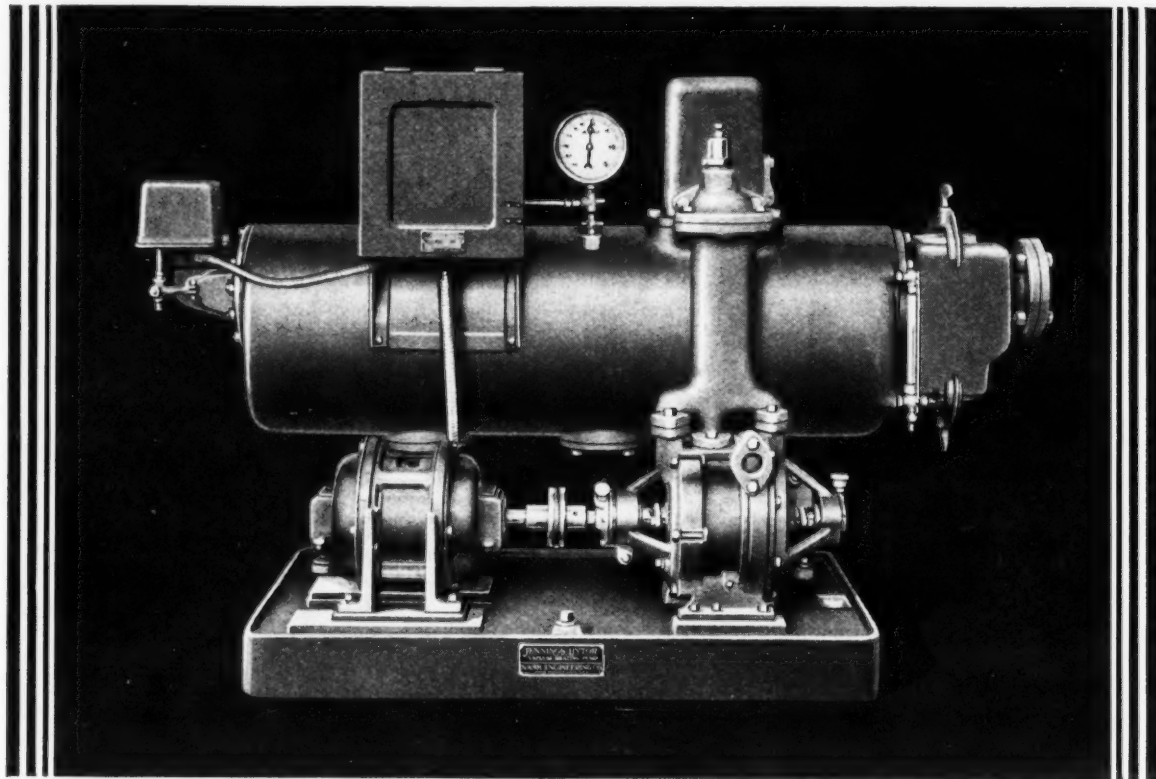
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APRIL,
1929

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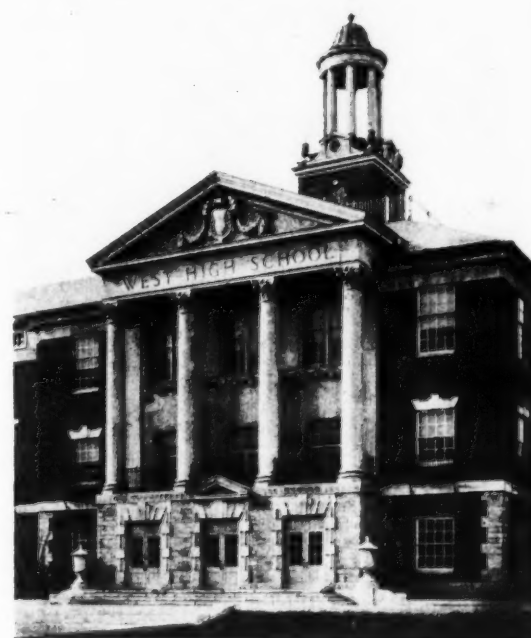
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ENTRANCE DETAILS, WEST HIGH SCHOOL,
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Columbus, Ohio.*

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The convention at Columbus, Ohio, on May 21 to 24, will be distinguished by a program¹ of papers and discussions that typify the ideals of service of the Association's membership. Incidentally, it will provide an opportunity for that personal exchange of experiences and views that is so important an element in all school conventions.

The alert school business official will find at the Columbus convention a rich fund of help in his administrative labors.

THE EDITOR.

¹A fragment of the tentative program appears on Page 144.

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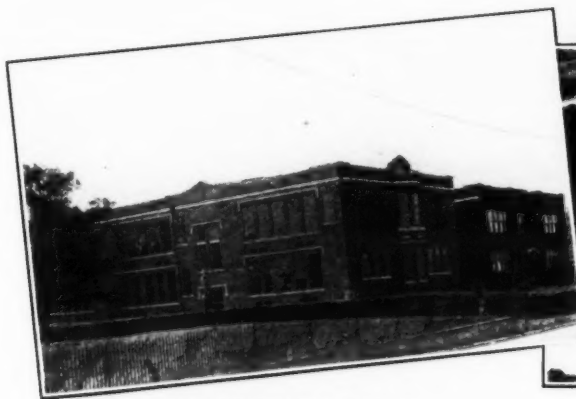
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Editorial Material—Manuscripts and photographs bearing on school administration, superintendence, school architecture, and related topics are solicited, and will be paid for upon publication. Contributions should be mailed to Milwaukee direct, and should be accompanied by stamps for return, if unavailable. Open letters to the editor must in all cases contain the name and address of the writer, not necessarily for publication, but as evidence of good faith.

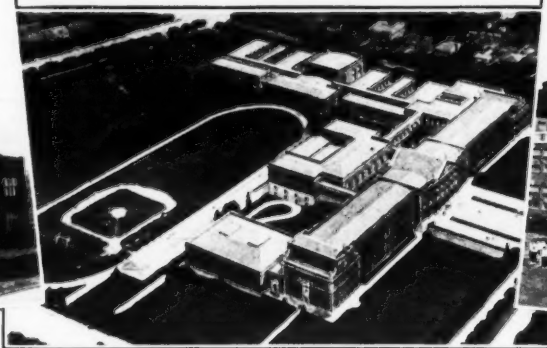
The contents of this issue are listed in the *Education Index* and *Current Magazine Contents*.



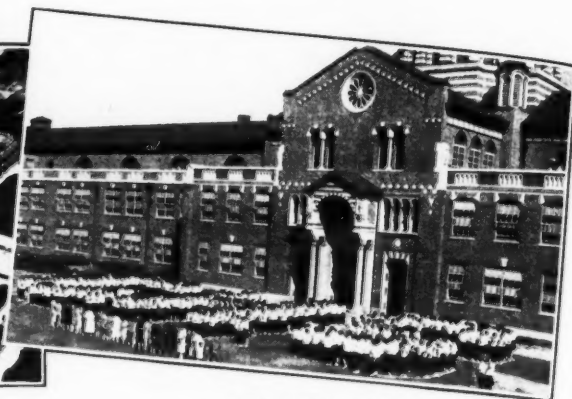
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Education Welcomes the Great Responsibility

The Third Degree

By One Who Holds It

Once upon a time—no, that's not right; it's been a thousand times upon a time—there lived an individual who had the notion that initials after his name were as essential to a place in the sun as were those before his name. But let's do like all great writers and deviate from the point of the story for the sake of intriguing the reader into a false idea of its real merits.

There are degrees and degrees. They have them at the poles, a manifestation of which is a sea of ice. They have them at the equator, where the same fields of ice would disappear as fast as a roll of greenbacks in a New York night club. Rubber has a degree of elasticity not common to metals. There are degrees with which political parties adhere to their platform; such degrees run below zero, so to speak. The writer has a higher degree of interest in writing this article than the reader will have in reading it. But on with the story.

There was a time in the annals of college training when it was deemed both expedient and necessary for the college graduate to seek employment after graduation. Nowadays, it appears that the advised procedure is for him to travel a year or two, or enter upon graduate studies to round out an apparently deficient undergraduate education.

In conformity with the conventionality of the older days, the writer began to seek a position shortly after he had been granted a diploma signifying that he could attach B.A. to his name. Strange as it then seemed, none of his written applications brought the anticipated response indicating that such-and-such an institution had an opening for a highly trained college graduate such as the writer appeared to be. After much letter writing it became apparent that personal application would have to be resorted to. Well, those were days when dads and mothers were more concerned with getting their son or daughter a place of employment than they were with having such child on their expense account for several years to come. So the writer, accompanied by his mother and father, set out to the nearby city to tell the superintendent of schools of that place that nobody's son was better qualified to occupy a position in that city's school system than the rising son in question.

Everything went extremely well up to the time of the interview. It was not difficult to locate the office of the school executive. It was not hard to persuade the custodian to let mother and dad sit out on the front steps while son climbed the stairs—with lighter heart than he descended them—to the place of interview. It was quite easy to present the office lady with a neatly engraved card with the name George Percival Sickles, A. B., on its face. It really ought to be interposed here that the lady sank into her chair with a sigh, which act was interpreted at the time to mean that she was relieved to know that at last the right applicant had presented himself for a position they had been trying to fill.

After what seemed an endless delay occasioned by several candidates' intruding their presence into the situation and demanding the time of the superintendent, the office lady handed the writer's card to that august individual in the swivel chair. He stifled a yelp which was also interpreted to mean that at last he had found the right man for the job, and motioned for the writer to enter the inner circle.

The applicant entered with a light tread, a light heart, and—in all honesty—a light head.

"I see your name is Mr. Sickles," grunted his majesty, without removing his eyes from the card.

"Yes sir; George Percival Sickles, A.B." the candidate eagerly returned.

That brought the head of the executive up with a snap. "Well, well, Percival, that's fine,"

he blurted out. "Go on with the rest of the alphabet and I'll see how well you know your A, B, C's."

"O, you don't understand," said the candidate, "those indicate the degree I have earned at college, sir, and show how well trained I am for the position."

"My young man, your act of putting them on this card and attempting to substitute them for ability and training, indicates how little you know!" sarcastically enjoined the superintendent.

"See here," he continued, "nine tenths of the candidates who apply for positions here have their A.B. degree. That's just one little formality necessary for eligibility to a position in this school system. But it doesn't mean anything. It is not a qualification. What we are seeking is the individual who is qualified for the job, not by attaching some letters on to his name, but by the individuality which attaches to the initials in front of his name. I don't care much about Mr. Sickles, A.B., but what can George Sickles do?"

The interview had no great interest for the candidate from that point on. He made a hasty exit. In the words of the poet, "he went like one that hath been stunned and is of sense forlorn." It should be added that "a sadder and a wiser man he rose the morrow morn." Although the blow was almost the one that killed father—and mother too, for that matter—the effect was salutary. No cards were afterwards carried. It also became firmly rooted in the writer's mind that he must be able to convince his prospective employer that he could do a real job of teaching a definite class of children in a definite subject. Those were the days when Latin was slipping a little, and male teachers were turning steadily to science and so-called practical subjects. But Latin was still taught in the high schools and needed teachers. The teacher who could make *sum, es, est* and *rosa, rosae, rosae, rosam, rosa* look and sound like the titles and printed conversation of a good movie picture, or could imbue the bust of great Julius Caesar with heroic life applicable to modern youth's ambitions, was able to obtain and hold a position in the best of high schools.

Upon this qualification the writer staked his fortune—and won. Yes; he got a job teaching first-year Latin, algebra, general science, English, and civics all in the same school. It seemed that a degree was one of the vague items of equipment necessary to get the position, but the proof that he could teach Latin got the candidate the job. It ought to be stated that the superintendent did not know a Latin idiom from a chemical formula, so it was easy to persuade him that the writer could really teach Latin.

And so the first degree had been earned, flaunted, and finally thrown aside except as a matter of record capable of being invoked in case of necessity.

But ambition settles on little as well as great heads. It was not long until the writer, looking ahead into the more fertile fields of the principalship and a superintendency, decided that such positions were easily obtainable upon the acquisition of the master's degree. How slowly

some people learn! But he trudged along—summer schools, evening classes at the nearby university, absentia courses, ad infinitum. Others who have succumbed to the same evil spirit will readily understand the felony. But it came, that second degree, and along with it the privilege of wearing the cap with the white tassel. But in its hidden parts there lurked disappointment. The old job was no longer good enough. A vacancy in the superintendency of a small rural high school provided the bait to lure the writer away from a sure thing to one quite intangible.

Mr. George Sickles, A.M., took a long shot at the position.

The board of education of the school in question was not composed of highly educated people, but none the less of keen, hard-headed, common-sense folks who cared more about results than promises. The conference began with the usual formalities and then veered around to specific qualifications of the candidate. Beginning with his educational equipment, the writer told of having his A.B. degree and his A.M. and then drifted off into his teaching experience. Before long, one board member who had been studying the written application of the candidate to the neglect of listening to the verbal report asked: "What association is this A.M. you speak about here? Some lodge you belong to?"

"No, Mr. Blank; that is another degree from the university, meaning Master of Arts and represents a great deal of training for a position of this kind. No man is really qualified to be a superintendent unless he has the Master's degree," explained the candidate.

"Well, that's strange," observed the board member. "The man who is just stepping out of this position didn't have this here Master's degree so far as we know, and he was a whirlwind of a superintendent. Look where he's going from here! To a job three times as big! I don't quite see that it is so necessary. Of course, we don't want a man without a college education, but seems to me we are looking for a man who can show us he can deliver the goods P. D. Q., regardless of whether he has the A.M. degree or not."

Your candidate sensed that he had stepped on the brake when he intended to step on the gas. Again he had fastened false hopes on the mere acquisition of a degree, leaving in the background the very equipment that might have carried the battle to victory. Suffice it to say that he thereafter sought a position where the Master's degree was a requisite for the position, but wisely centered attention on his ability to do the job.

The story is progressing. Why should the reader be bored with further details? He knows what the next act will bring out.

In order to shift to college work, the writer felt that the sure and glorious way was by means of the Ph.D. "Yea, verily," thought he, "the man with a Ph.D. has naught to do but push back the eager employers as they rush to grab him for a high-salaried, dignified, and permanent position!"

How poor are they who have not faith; but "faith without works is dead." The third degree is not different from the others. What to do with it when once acquired is the perplexing question. The writer has finally learned his lesson. He has not sought a position on the strength of the degree, but principally on the training for the job that the earning of the degree has given. The degree may be a necessary formality to the acquisition of a certain kind of educational position. In other words, it is a good ticket to the beach. But one can't learn to swim on it. To do any swimming the individual has to get into the water and do some hard kicking and pulling. The ticket won't support one ounce of his weight. The ability to keep from drowning depends no more on the ticket than does the ability to do the job in education depend upon the Ph.D.



School Business Administration-I

Geo. F. Womrath, Assistant Superintendent of Schools, Minneapolis, Minn.

A Proper Perspective

The business administration of a public-school system in its relation to the construction, operation, and maintenance of school buildings properly may be considered under the following headings:

1. General statement with reference to a proper perspective of the superintendent's responsibility.
2. Selection of site (location of building).
3. Educational specifications.
4. Architectural design, plans, and specifications.
5. Portables.
6. Building construction.
7. Mechanical equipment.
8. Educational equipment.
9. Landscaping.
10. Building construction supervision.
11. Insurance.
12. Janitorial-engineering service.
13. Supplies.
14. Textbooks.
15. Rehabilitation of school buildings.
16. Analysis of costs.

The above headings list in their logical order the procedures which attend the production of a schoolhouse, from the selection of a site to the occupancy, maintenance, and administration of the building.

Before a schoolhouse can be built a site must be selected (2)¹ and purchased. Sites should be selected in accordance with a predetermined educational program set up by the superintendent and approved by the board. The order in which the sites are utilized will be determined by the growth of the school population and the educational requirements. When a site is to be built upon, the next step is for the superintendent to prepare the educational specifications (3) for the building. This is done with the cooperation of the assistant superintendents and to conform to the curriculum adopted by the board.

The educational specifications having been prepared, approved, and adopted by the board, an architect is selected who, with the superintendent, prepares the architectural design, plans, and specifications (4) for the building. These plans may involve either a permanent or a temporary portable (5) building.

The Selection of the Design and Materials

An important part of the architectural studies as related to a new building is the selection of the design and materials which shall enter into the construction of the building. The next step is, therefore, a diagnosis of the elements of building construction (6).

Following the preparation of the building plans, and in a large measure coincident therewith, is the preparation of the plans and specifications for the mechanical equipment (7) and the educational equipment (8) which go into the building, and the landscaping (9) which surrounds it, as the building cannot be operated without the mechanical equipment nor can modern instruction be given in it without the educational equipment, nor should the aesthetic value of a vast investment by the community be violated by neglecting to provide a properly landscaped setting for the building.

When this stage is reached, the board's approval of all plans and specifications should be secured. Bids are then called for.

After the bids are received and the contracts awarded, the construction of the building begins, and from then on the most rigid building-construction supervision (10) should be observed. From a material standpoint, this stage of the procedures is vastly more important than has been heretofore or now is generally recognized. Examples are numerous of well-prepared building plans and specifications being practically

This paper is the first of an important series to be presented in the **SCHOOL BOARD JOURNAL** by an outstanding business superintendent of a large city school system, Minneapolis. The business management of the Minneapolis schools has for many years attracted the attention of educators and school boards because of the interesting manner in which the planning and erection of buildings, the purchase of supplies, the accounting, the management of school buildings, etc., has been dovetailed into the educational program. The Minneapolis schools have been an outstanding example at the same time of efficiency and economy in the best sense of these terms. School-board officials will find in these papers the results of mature thought, of a keen appreciation of the underlying principles, and of long and successful experience.—The Editor.

nullified by gross inferior construction due to lack of proper supervision.

The building completed, it should be insured (11).

The next step is to provide janitorial-engineering service (12) for its care and operation.

The building erected, equipped, and serviced, it follows that supplies (13) and textbooks (14) should be furnished for use by the teachers and pupils. The building is then ready for occupancy as an educational institution.

The building in full operation and use, there is at once introduced the problem of maintenance, often referred to as building repair and improvement, or rehabilitation (15). This completes the progressive steps to be followed from the time the new schoolhouse is conceived to its completion, operation, occupancy, and maintenance.

The orderly procedure outlined can be carried out consistently only when each step is properly correlated with all other steps and with the fundamental objective of public education; namely, the effective, efficient, and economical education of the youth of the nation. The responsibility for this education falls primarily upon the superintendent, who should not be handicapped by a subdivision of authority. A proper perspective regarding the superintendent's responsibility is, therefore, quite essential.

Not many years ago, when a school building was needed, the common practice was for the school board, or the superintendent, or the school building committee to select an architect and tell him to prepare the plans for a schoolhouse of a stated number of rooms or to accommodate a stated number of pupils. This was often the extent of the specifications which the architect received. In many instances the architect selected was totally unfamiliar with schoolhouse design; perhaps had never before designed or built a schoolhouse. Sometimes it happened that the superintendent himself became the architect. This is still true in some locations even in this age and day. The building produced under this procedure was often startling. Yet, the feat was not impossible before the days of fire-resisting construction and sanitary equipment. During this period the question of economy in schoolhouse design, construction, and equipment was a secondary consideration.

After the schoolhouse was built, the superintendent not only acted as superintendent of instruction, but he was also the principal and filled many other positions involving secretarial duties, the selection and purchasing of supplies, and the responsibility for the operation and maintenance of the plant. If the system was a large one, these several duties were sometimes assigned to other officials who, in time, were made entirely independent of the superintendent, resulting, finally, in the creation of the dual organization, or educational versus business administration. As for standards for heating, ven-

tilation, lighting, and sanitation, there were none.

Then came the second period, or that of the specialists in schoolhouse architecture; men who made a worth-while study of schoolhouse design and construction, and to whom the educational world is immeasurably indebted.

These men with their engineers made exhaustive and extremely valuable studies of the schoolhousing problems in many cities, involving many types of school administration and widely divergent curricula. Surveys were made to establish relationships between educational activities and needed floor space, the ultimate outcome of which was the *Candle of Efficiency*.² Mechanical and physical data were worked out which resulted in the establishment of state and city rules, regulations, laws and ordinances prescribing minimum lighting requirements, types of construction, ventilation regulations, and a vast amount of data which have since become quite generally standardized.

The ideas of these experts were carried from one part of the United States to another; and during this period the architects and engineers practically ran the public schools insofar as schoolhouse designing, planning, and equipping were concerned, and the superintendents assumed subordinate positions. The pendulum had swung to the other extreme of the arc. Schoolhouses were designed and constructed almost without any consideration at all being given the superintendent, and in many instances without regard to cost, elaborateness, or size and number of rooms contained in the buildings erected. Time and time again a schoolhouse was handed over to the superintendent with the admonition "go ahead and run it"—a building which he had had no part whatever in planning, designing, or equipping. In many instances the superintendent did not even have an opportunity to express his opinion as to the activities which were to be carried on in the building when it was completed. Nor has this procedure yet disappeared in many localities.

Furthermore, the separation became more and more pronounced between the superintendent and the person to whom the responsibility of operation and maintaining the school plant was delegated. This was especially true in those localities where the positions of secretary, business manager, and others of equivalent rank were elective or appointive, or whose tenure of office was politically controlled.

Whether it was the general financial extravagance and high cost of the schoolhouses which were designed and constructed during this second period of development, or a recognition on the part of the superintendents of their waning responsibility and that they were playing second fiddles in the educational orchestra, or whether it was an educational awakening on the part of the citizenry, or a reawakening of the ancestral spirit of thrift augmented, perhaps, by the economic experiences of the Great War, or whatever the cause, by the year 1915 the pendulum began to swing back again insofar as the instructional activities in connection with the educational work of the schools were concerned. Superintendents began to seek better training and a better knowledge of the requirements of their profession. School boards began to recognize that they were the legislative bodies and that the superintendents were to be left to administer the educational functions of the school system.

The Dual Position of the Superintendent

At first the search for a way out was confined to the instructional program. But as time passed, both educators and laymen began to recognize

¹Figures in () refer to the headings with corresponding numbers.

²Report of Committee on Standardization of Schoolhouse Planning and Construction, National Education Association, Washington, D. C.

that the superintendent of a school system holds a dual position which in industry is more often designated by the title of general manager. He is not only responsible for the instructional phases of education but, also, for the physical surroundings in which the youth of the nation are being educated. It gradually became fixed in consciousness that the principle of direct responsibility should be applied to the school business as it is to industry, namely, that the person responsible for the quality of the product and its cost should also be made responsible for the complete organization and machinery through the quality and cost of the product are determined.

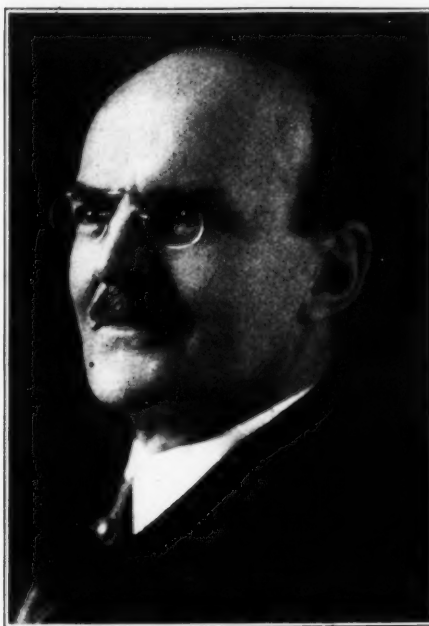
It is inconceivable that any large industrial plant could maintain a successful organization if the sales manager, or the factory superintendent, or the purchasing agent were independent of the general manager. Nor is it conceivable that the general manager of any large, successful industrial plant would interfere with the sales manager, or factory superintendent, or purchasing agent while carrying out his policies. This does not mean that the subordinates to the general manager are not allowed a wide range of independent action in using their own initiative and individuality to refine and better the general manager's fundamental policies. There are many instances, however, where there has been interference resulting in confusion and failure. The way out of such a situation is simple. The principle of related responsibility should not be changed, but the subordinates who will not carry out the general manager's policies should be changed and replaced with others who will. Or, if the general manager is at fault, then the directors should replace him with a competent official.

As applied to a school system, no matter whether it is operated and organized as a one-man system, or as a dual system, or as a multiple system, there will be no notable success and no concerted, harmonious activity unless there is a close, friendly cooperation and noninterference on the part of all concerned. Many instances may be cited where local school administrators individually are exceptionally competent men. In the absence of a definitely outlined organization defining the line of responsibility, each one is striving to see who can be the greater. Suspicion is rampant. In the absence of teamwork the wonderful executive and administrative ability of the individuals is completely nullified and the whole system is a failure.

Men prominent in school affairs were fully aware that only a few superintendents had sufficient and broad enough training to warrant them assuming the dual responsibility connected with both the instructional and business sides of public-school administration. So they proceeded to set up the machinery which would enable superintendents who so desire to acquire this training. Hence the extension classes for school superintendents and others at the various colleges and universities.

As the superintendent began to be recognized in his dual role, we find the architect and the superintendent sitting together and discussing and selecting designs and elevations pertinent to architectural beauty, grace and design; working out the problems of space allocation and economic floor planning for the kind, size, and relationship of rooms needed and their utilitarian arrangement; examining construction features and studying and comparing costs and subsequent maintenance charges; judging building materials with respect to their practicality and longevity; selecting efficient mechanical and educational equipment on the basis of low original cost, present economic value and future cost of maintenance; and considering many other details.

We also find the business superintendent, the auditor, the purchasing agent, and others acting less independently but conferring and cooperating with the superintendent in the fulfilling



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of an educational program set up by him, and with the board of education at all times exercising its unquestioned right and prerogative to legislate and pass upon the superintendent's program, approve the curriculum, designate the amount of money to be spent, approve building plans and specifications, and decide all fundamental procedure.

The Superintendent the Guiding Hand in School Instruction

Hence we witness the third period wherein the superintendent is being acknowledged as the central and guiding factor in determining not only what the curriculum shall be, but in deciding what kind of a building shall be built, its design and construction, how the space in the building shall be arranged to carry out the curriculum in the best way, how the building shall be operated and maintained, and what supplies shall be used in the educational work. This is the superintendent's rightful and proper sphere. Unfortunately, the number of superintendents capable of carrying this responsibility is as yet very small; but their number is increasing. Already there are some outstanding figures.

There is no easy road to the acquisition of a full knowledge of the mechanics of the physical side of public-school administration. No superintendent should expect a short, intensive course of study to develop him into an expert engineer and business superintendent. There is no open sesame to these lines of professional service. But, regardless of whether the person who becomes the head of the one-man controlled school system of the future is called a superintendent, or a general manager, or by some other title, it is certain that he will not fill that position by force of personality alone nor because he is a specialist in business administration. He will be appointed because he possesses a combination of qualifications essential to the efficient administration of a public-school system, educational, financial business, and managerial, as what is needed are men who possess the qualifications which make up the modern, highly specialized, successful administrator and executive.

Mr. Carroll R. Reed, superintendent of schools, Minneapolis, Minn., says: "As a superintendent of schools naturally I agree with the college professors and research men, who state that the superintendent of schools should be the head of the school system and that all business and financial matters should be subordinate to the educational problems. While we may agree with this principle there is need for common sense in the interpretation of it. The office of superintendent of

schools in a large city has become an exceedingly complex proposition; in fact, if the superintendent personally supervised all the activities which are outlined for him it would be an impossible job for one man. Inasmuch as most people feel that they know more about school buildings, janitors, the purchase of school sites, and other problems of finance than they do about the quality of teaching, or the objectives of the course of study, the superintendent of schools who assumes complete responsibility for all of these duties is very apt to find the noneducational phase of the problem taking more of his time than the larger and more important problems of educational policy. The unit type of control in the organization of private affairs is most efficient. At present there is a tendency toward the same type of organization in public affairs. As evidence of this we have the growth of the city manager form of municipal government. The difficulties which arise between the superintendent of schools and the business manager or director of schools are liable to arise between the superintendent of schools and school principals or assistant superintendents. In fact there are probably just as many examples of friction in the school machinery in one place as in the other. Such difficulties can seldom be remedied by charts showing the ideal administrative organization or by rules designed to keep people in their proper place. They are essentially problems in human relationships which can only be solved by considering the strength and the weakness of the different individuals involved. Any organization which contains individuals who are not willing to work for the good of the team, but who conduct their affairs on a personal plane and make every move for their own personal aggrandizement, is bound to have administrative difficulties and irritations."

While the superintendent should be a thoroughly competent educator and a good business man, this does not mean that he must be a bookkeeper. He should know, however, what figures mean and what figures he needs to enable him to control his financial budgets. He calls upon his bookkeeper for these figures and when he gets them should be able to interpret and understand them.

Nor does the superintendent need to be an architect. He should know, however, how to arrange the floor space and instruct the architect what arrangement of space is necessary in order to meet the educational requirements when the building is in operation. After the educational specifications have been turned over to the architect the superintendent should confidently expect him to prepare the detailed plans and specifications of a school building which will properly house the pupils and carry out the educational program. He should be able to read a blue print of a simple floor-plan drawing so that he can visualize the allocated space in the proposed new school building.

Nor does the superintendent need to be a realtor. He should know, however, how to locate sites and when to direct the realtor to buy. He then looks to the realtor to get right prices and to close the purchase transactions with proper execution of title, deeds, and all necessary papers and conveyances.

The superintendent should be concerned only in the results that should be demanded from bookkeepers and accountants rather than in the method of keeping books; in the results to be expected and demanded from janitors and engineers rather than in the formulation of procedures through which the results are to be derived; in the economic construction administration, and operation of schoolhouses rather than in the architectural skill involved in the preparation of the plans and specifications.

While modern school organization makes the superintendent directly responsible for the edu-

(Continued on Page 151)

The Duties of Public-School Administrators-III

Fred C. Ayer, Professor of Educational Administration, the University of Texas

IV. EXECUTIVE MANAGEMENT

There is an important group of duties in the field of public-school administration which has never been well analyzed or classified. This group includes the numerous duties which seem necessary to be performed by the superintendent of the school system or by the principal of a building because he is the chief executive officer in charge. By virtue of his position the chief executive becomes responsible for a definite amount of personal leadership and control, both inside and outside of his office. As executive head he must organize his office for the transaction of business, he must represent his school in its official contact with its school patrons, and he must maintain a professional status suitable to meet the changing requirements of his office. This group of duties may well be called duties of *Executive Management*. They fit in between the duties of general control already discussed, and the duties of business management to be discussed later.

For purposes of the present study, the duties of executive management have been divided into three subordinate groups; namely, (1) *office management and routine*; (2) *community management*; and (3) *professional status*. Each of these will be treated in turn.

1. Office Management and Routine

The field of office management and routine embraces 49 administrative duties covering a wide range of activity and of widely varying importance. A number of these duties are too trivial or routine in character to be considered as truly administrative, but they have been included because of the general frequency with which administrative officers actually perform them. The office and miscellaneous duties of the school superintendent frequently occupy a larger share of his time than the principles of good school administration warrant. The greater number of these routine duties may be handled more economically by a clerk. They are not as a rule duties of high importance, but because of the fact that they usually call for immediate action the superintendent postpones more significant duties in their behalf. A good clerk does not relieve the superintendent of these clerical and routine responsibilities. The clerk merely facilitates the superintendent's discharge of his clerical duties in a more rapid and effective manner.

The duties discussed up to the present time in this series of articles have, on the whole, been performed much more commonly by superintendents than by the other three classes of administrative officers included; namely, general principals, high-school principals, and elementary-school principals. This is not the case with office duties. The respective percentages of administrative officers who performed this group of duties during the year of this study were more nearly even. The percentages follow: superintendents, 57 per cent; general principals, 54 per cent; high-school principals, 56 per cent; and elementary-school principals, 48 per cent.

For the purpose of emphasizing the contrast between the more and the less important office duties which appear in about equal numbers in the field of executive management, the total list of 49 duties is divided into two groups which appear here as Tables X and XI, Table X contains a list of 23 office duties which were rated by 50 selected school administrators to be either of primary or of average importance. Table 11 contains 26 office duties which were rated by the same group of judges to be either of minor or of no importance. A grade of 1 is given to duties which were judged to be of a major importance and which should receive primary attention from superintendents of schools; a grade of 2 to duties of average importance which should receive secondary attention from super-

The article which follows continues an analysis of the duties of public-school administrators, based upon detailed returns secured from a total of 663 principals and superintendents in various sections of the United States. Previous articles have been devoted to the general distribution and vocational variations of one thousand administrative duties, and to a detailed analysis of the field of educational administration known as general control. The present article continues the series with a special analysis of the administrative duties in the field of executive management.

intendents; a grade of 3 to duties of minor importance which should receive little attention from superintendents; and a grade of 0 to duties which were considered of no importance and which should receive no attention from superintendents. The values marked by an asterisk in Tables X and XI are those which one half or more of the judges gave the rank indicated.

From the theoretical point of view, Tables X and XI make an excellent division between du-

centages of general principals, high-school principals, and elementary-school principals who performed them. Then follows the median frequency with which it was performed by all superintendents who performed it; and finally its administrative value or degree of importance when performed by a superintendent as judged by 50 administrators. For example, the first duty in Table X, *Sign diplomas*, was performed by 98 per cent of the 278 superintendents reporting, by 94 per cent of the general principals, by 89 per cent of the high-school principals, and by 61 per cent of the elementary-school principals; it was performed on the average once a year; and it was judged to be a duty of first importance, a judgment in which over one half of the judges concurred.

All of the duties listed in Table X as being of first importance (marked 1*) were judged so by over one half of the judges, but none of the average duties (marked 2) received a majority vote at that value. As a matter of fact, there was, for the most part, a much wider difference of opinion concerning the value of the duties whose median values are marked 2. This was the most marked in connection with the duties: *Keep*

TABLE X. MAJOR ADMINISTRATIVE DUTIES PERTAINING TO OFFICE MANAGEMENT AND ROUTINE
(Frequencies are d for daily, w for weekly, m for monthly, y for yearly, y² for two times a year, etc. Values are 1 for primary, 2 for average, 3 for minor, and 0 for no importance.)

DUTY	Percentage of Administrators Performing				Median Frequency	Median Value
	Supt.	Gen. Prin.	H. S. Prin.	E. S. Prin.		
1. Sign diplomas.....	98	94	89	61	y	1*
2. Receive callers.....	94	97	92	90	d	1*
3. Read mail.....	93	93	93	77	d	1*
4. Use telephone.....	89	80	92	80	d	2
5. Order diplomas.....	89	67	51	44	y	2
6. Write letters.....	88	94	86	81	d	2
7. Prepare diplomas.....	86	81	67	45	y	2
8. Sign letters.....	82	47	77	39	d	2*
9. Keep school day office hours.....	77	65	66	61	d	1*
10. Keep calendar up to date.....	75	72	85	76	d	2
11. Introduce visitor to teachers.....	70	74	79	67	m	2
12. Present diplomas.....	68	71	38	41	y	2
13. Schedule dates for school auditorium.....	66	56	81	46	m	2
14. Dictate letters.....	58	35	60	22	d	1*
15. Keep daily program book.....	53	51	61	59	d	2
16. Make daily program of special duties.....	53	42	68	62	w	2
17. Give instructions to stenographer.....	49	24	68	62	d	1*
18. Keep Saturday office hours.....	49	21	37	10	w	2
19. Assign work to office force.....	44	21	52	12	d	1*
20. Instruct student assistant in office work.....	42	44	44	29	m	2
21. Place visiting teachers.....	29	35	37	42	m	2
22. Employ school clerks.....	23	11	19	2	y	1*
23. Assign school clerks.....	21	11	20	7	y	1*
Average.....	65	56	64	48		

*More than one half of the judges assigned this value.

ties which an administrative officer should perform in person and those which should be assigned to a subordinate clerical officer. The duties in Tables X and XI are arranged according to the relative numbers of superintendents performing them, the duty most commonly performed being listed first. The percentage of the 278 superintendents performing each duty is first given. The next three columns show respectively the per-

centage of general principals, high-school principals, and elementary-school principals who performed them. Then follows the median frequency with which it was performed by all superintendents who performed it; and finally its administrative value or degree of importance when performed by a superintendent as judged by 50 administrators. For example, the first duty in Table X, *Sign diplomas*, was performed by 98 per cent of the 278 superintendents reporting, by 94 per cent of the general principals, by 89 per cent of the high-school principals, and by 61 per cent of the elementary-school principals; it was performed on the average once a year; and it was judged to be a duty of first importance, a judgment in which over one half of the judges concurred.

TABLE XI. MINOR ADMINISTRATIVE DUTIES PERTAINING TO OFFICE MANAGEMENT AND ROUTINE
(Frequencies are d for daily, w for weekly, m for monthly, y for yearly, y² for two times a year, etc. Values are 1 for primary, 2 for average, 3 for minor, and 0 for no importance.)

DUTY	Percentage of Administrators Performing				Median Frequency	Median Value
	Supt.	Gen. Prin.	H. S. Prin.	E. S. Prin.		
1. Open mail.....	86	90	82	76	d	3
2. Go to post office.....	80	62	58	44	d	0*
3. Deliver message to teachers.....	79	80	72	78	w	3
4. Use typewriter.....	79	24	28	15	d	3
5. Write announcements.....	78	80	80	78	w	3
6. File papers.....	76	74	75	61	d	3
7. Send students on errands.....	71	76	82	81	w	3
8. Call teacher to phone.....	67	61	61	68	w	0*
9. Give pupils permission to make announcements.....	63	84	86	70	w	3*
10. Supervise assembling, passing and dismissing.....	60	90	87	88	d	3
11. Make out honor roll.....	55	70	77	68	m	3
12. Take care of lost and found articles.....	54	74	63	72	w	0*
13. Show teachers how to operate mimeograph.....	49	50	34	29	y	3
14. Operate mimeograph.....	49	59	29	39	w	0*
15. Cut stencil.....	44	40	17	27	w	0*
16. Administer correspondence examinations.....	42	24	28	15	y	3
17. Make bulletin board.....	41	52	44	49	w	0*
18. Keep charge of bulletin board.....	41	49	58	55	w	3
19. Make out attendance certificates.....	40	67	45	61	y	3
20. Sort mail for faculty.....	36	44	46	47	d	0*
21. Deliver mail.....	35	29	31	34	d	0*
22. Make out achievement certificates.....	28	38	24	37	y	3
23. Assign lockers.....	22	12	42	15	y	0*
24. Write literary gems on blackboard.....	18	36	21	37	w	0*
25. Deliver pay to substitute janitor.....	17	9	12	17	m	0*
26. Show janitor how to clean mimeograph.....	16	9	6	7	y	3
Average.....	51	58	50	49		

*More than one half of the judges assigned this value.

consider it highly important to sign their own letters, but are not so favorable toward instructing students in the performance of their office duties. Compared with other types of administrative duties, there are many daily and weekly office duties and few duties which are performed on a monthly or a yearly basis. There seems to be no significant relation between the frequency of performance of the various duties and their administrative value, although the primary and average duties in Table X are, on the whole, performed by greater numbers of superintendents than the minor and zero duties listed in Table XI.

The 26 duties listed in Table XI as being of minor or of no administrative importance and deserving little or no time from the superintendent of schools personally, merit special comment, if for no other reason than the fact of the considerable numbers of administrative officers who perform them. Probably the most significant feature revealed in Table XI is the comparatively large number of office duties performed by large numbers of administrators concerning which there is a very general agreement that they should receive no attention whatever. The following duties, for example, were rated by over one half of the judges as being of no administrative importance: *Go to the post office, Call teacher to the phone, Take care of lost and found articles, Operate mimeograph, Cut stencil, Make bulletin board, Sort mail for faculty, Deliver mail, Assign lockers, Write literary gems on blackboard, and Deliver pay to substitute janitors.* The only duty concerning which every judge voted to be of no administrative importance is the duty *Deliver mail*. Notwithstanding this complete unanimity of opinion concerning the total lack of importance of delivering mail, it should be noted that 35 per cent of the entire group of superintendents performed it, the median performance being daily.

On the whole, superintendents and principals perform office duties in about equal numbers. There are some notable exceptions. Surprisingly enough, only 38 per cent of the high-school principals and 41 per cent of the elementary-school principals present diplomas, as contrasted with 68 per cent of the superintendents. Eighty per cent of the superintendents go to the post office daily, a duty of no administrative value, in contrast to an average of 55 per cent of the principals. The high-school principals seem to be better situated in the matter of receiving office assistance than the elementary-school principals. They dictate letters, for example, in 60 per cent of the cases, as contrasted to 22 per cent of the elementary-school principals. The high-school principals are also more given to formal office work. For example, 37 per cent of the high-school principals keep Saturday office hours in contrast to 10 per cent of the elementary-school principals; and 66 per cent of the high-school principals keep school-day office hours in contrast to 61 per cent of the elementary-school principals.

Finally, it should be noted that there is considerable difference of opinion among the 50 judges concerning the administrative value of many of the duties to which the median judge gave a value of 3. The duty, *Write announcements*, was assigned almost as many first and second values as it was third and zero values. Twenty per cent of the judges voted that the duty, *Send student on errands*, had no administrative value, but 12 per cent of the judges voted either that it was of primary or of average value. *The supervision of assembling, passing and dismissing, The administration of correspondence examinations, and The making out of achievement certificates*, received almost equal numbers of votes for all four values. These duties are typical of a considerable number of present-day administrative duties about the value of which there seems to be no consensus of opinion. A

TABLE XII. ADMINISTRATIVE DUTIES PERTAINING TO RELATIONS WITH PARENTS
(Tabular arrangement and symbols as in Table XI.)

DUTY	Percentage of Administrators Performing				Median Frequency	Median Value
	Supt.	Gen. Prin.	H. S. Prin.	E. S. Prin.		
1. Adjust complaints of parents.....	91	89	85	83	m	1*
2. Read note from parents.....	90	88	88	88	w	1*
3. Encourage parents to visit school.....	90	96	94	90	m	1*
4. Investigate complaints of parents.....	90	89	85	85	m	1*
5. Notify parents of school opening.....	85	67	67	46	y	1*
6. Answer note from parents.....	82	78	82	83	m	2
7. Make acquaintance of patrons.....	81	84	85	85	w	1*
8. See parents about absent pupils.....	75	82	85	83	m	2
9. Visit homes to meet parents.....	69	82	67	78	m	2
10. Notify parents of child's bad habits.....	68	71	70	76	m	2
11. Notify parents of visiting day.....	64	61	55	68	y ²	1*
12. Attend meeting of P. T. A.	64	61	42	66	m	1*
13. Telephone parents regarding pupil's status.....	62	46	70	63	m	2
14. Speak at P. T. A. meeting.....	62	59	39	63	y ⁴	1*
15. Announce meeting of P. T. A.	54	53	41	68	m	2
16. Serve on committee of P. T. A.	52	50	28	54	m	2
17. Report difficulty with parent to board.....	50	48	27	25	y ²	2
18. Send "poor work" slips to parents.....	46	41	67	46	m	2
19. Settle parent-teacher disagreement.....	45	44	39	41	y ²	1*
20. Entertain parents during evening.....	44	44	46	42	y ⁴	3
21. Supervise work of P. T. A.	40	36	19	51	m	2*
22. Confer with Mothers' Club.....	37	20	17	37	m	2
23. Secure speaker for P. T. A.	37	32	17	41	y ²	2
24. Promote fathers' and sons' banquet.....	36	23	36	22	y	2
25. Help parents choose book sets.....	36	32	16	29	y ²	3*
26. Organize P. T. A.	27	29	10	33	y	2
27. Secure library books for parents.....	24	26	15	15	y ²	3
28. Serve as officer of P. T. A.	24	24	12	27	y ⁴	2
Average.....	58	56	50	57		

*More than one half of the judges assigned this value.

great many of them are performed by superintendents and principals, no doubt, because there is no one else ready at hand to take care of them.

2. Community Management

One of the most important phases of the school executive's work lies in his personal and professional relationships to the community that maintains the schools over which he presides. Both for his own interests and for the welfare of the schools it is necessary for the school executive to play a significant part in the moral and civic life of the community. Moreover, no other man in the entire city commands more trust and confidence on the part of parents and public-spirited citizens. The principal's and superintendent's professional duties lead them into intimate contact both with individual parents and with organized groups of parents, while their welfare and civic activities bring them into important association with the influential leaders of community life. The school executive is, indeed, a "servant of all the people" and he who prefers personal and professional privacy or shuns public contacts should never attempt this type of community service.

The duties of community management form a fairly homogeneous group as a whole, but for purposes of special analysis they have been classified as follows: (1) relations with parents; (2) church and welfare duties; (3) civic duties; and (4) miscellaneous executive duties.

1. Relations with Parents

There are 28 duties which bear upon the public-school executive's relations with parents. These duties, as a group, are of a strikingly different character than those which pertain to office management and routine. They deal with school matters of common interest to teachers and school patrons or with disciplinary matters in which the parents of certain children are directly interested. The 28 duties which relate to

administrative contacts with parents are listed in Table XII in order of popularity of performance by superintendents of schools, the duty most commonly performed appearing first. The arrangement and symbols used in Table XII are the same as in Tables X and XI.

It is interesting to note that *Adjust complaints of parents* is the most commonly performed duty in this group, and is rated to be of primary importance. The median frequency of performance was once a month. Nine out of 10 superintendents encourage parents to visit school; 7 out of 10 superintendents visit homes to meet parents; 46 per cent send "poor work" slips to parents; and 36 per cent promote fathers' and sons' banquets. It is evident that parent-teacher associations have been organized in about two thirds of the school communities represented, and that school executives take prominent parts in the work of this organization. Approximately 60 per cent of them attend and speak at P. T. A. meetings, about 40 per cent supervise the work of the P. T. A., and about 25 per cent serve as P. T. A. officers. The various duties are for the most part on a monthly or part-yearly basis. Two of the duties included in Table XII, *Promote fathers' and sons' banquets* and *Help parents choose book sets*, each of which was performed by approximately one third of the executives, are suggestive of the extensive spread of the work of a public school administrator. There are few significant differences between performance on the part of principals and superintendents. Principals, as a rule, notify parents of the opening of school much less commonly than the superintendents. The elementary principal has more contacts with the P. T. A. than the superintendent of schools, but the high-school principal has a noticeably low percentage of performance in this connection.

TABLE XIII. ADMINISTRATIVE DUTIES PERTAINING TO CHURCH AND SPECIAL WELFARE
(Tabular arrangement and symbols as in Table XI.)

DUTY	Percentage of Administrators Performing				Median Frequency	Median Value
	Supt.	Gen. Prin.	H. S. Prin.	E. S. Prin.		
1. Attend religious meeting.....	89	94	75	75	w	3
2. Attend church social function.....	84	90	86	56	y ³	3
3. Teach Sunday school class.....	56	52	50	32	w	3
4. Speak at church brotherhood meeting.....	53	40	50	12	y ²	3
5. Participate in young people's religious meeting.....	41	32	48	35	m	3*
6. Help in church music.....	39	29	28	35	w	3*
7. Help get clothing for needy children.....	39	33	42	75	y ²	3*
8. Take part in Boy Scout work.....	36	27	26	27	y ⁴	3*
9. Get names of poor children.....	36	32	30	55	y ²	3*
10. Speak at Boy Scout meeting.....	35	23	29	22	y ²	2
11. Arrange Red Cross campaign.....	33	27	20	37	y	3
12. Confer with leader of Girl Reserves.....	28	14	34	27	y ²	3
13. Take part in Hi Y work.....	21	8	36	5	y ³	3*
14. Fill absent pastor's pulpit.....	18	8	7	5	y ²	0*
15. Speak at Y. M. C. A.	18	6	20	5	y ²	2
16. Arrange bundle day campaign.....	13	6	12	32	y	3
17. Help direct child welfare club.....	9	6	1	13	y ²	2
18. Assist with summer Bible school.....	5	3	5	2	y	0*
Average.....	36	29	33	31		

*More than one half of the judges assigned this value.

The 50 judges ranked most of the duties pertaining to parents as being either of primary or of average importance. Those considered of least importance were usually performed by fewer superintendents. There was, however, considerable disagreement among the judges about the value of answering notes from parents, and practically no agreement as to the value of seeing parents about absent pupils or of notifying parents of a child's bad habits. The majority of judges assigned little or no value to the duty of entertaining parents during the evening. It is worthy of special note that the duty receiving the largest number of no-value votes was *Serve as officer of P. T. A.* This, coupled with the fact that comparatively few administrators actually perform this duty, raises a very fair doubt against its administrative desirability.

(2) Church and Special Welfare Duties

There are 18 duties which public-school executives perform in connection with their church and special welfare activities. It is difficult to tell how many of these duties are performed solely on account of the performer holding an executive position in the public schools. Many of them undoubtedly are, but the data exhibited in Table XIII merely reveal the contacts which principals and superintendents actually have with church and welfare agencies without ascribing the source of motivation.

Little comment need be made with reference to the performance of the specific duties listed in Table XIII. On the whole, these duties are less commonly performed and judged to have less administrative value than the groups of duties which have been treated thus far. There are numerous performance variations among the different types of administrative officers. The superintendents, for example, quite generally keep in greater contact with public religious activities than do the elementary-school principals. On the other hand, the elementary-school principals outstrip the superintendents two to one in such duties as *Help get clothing for needy children*, *Arrange bundle day program*, and *Help direct child welfare club*. The fact that the superintendency is an elective office may have some bearing upon this situation.

Probably the most outstanding feature of Table XIII is the fact that the great majority



MR. HOOVER HONORS HIS OLD TEACHER

During the festivities incident to the inauguration of President Hoover, a delegation of citizens from the President's home town was received at the White House. The most interesting figure in the group was Mrs. J. K. Carran, who was the President's teacher when he was ten years of age and was enrolled in the fourth grade of the West Branch School. (Int. Newsreel Photo.)

TABLE XIV. ADMINISTRATIVE DUTIES PERTAINING TO CIVIC ACTIVITIES
(Tabular arrangement and symbols as in Table XI.)

DUTY	Percentage of Administrators Performing				Median Frequency	Median Value
	Supt.	Gen. Prin.	H. S. Prin.	E. S. Prin.		
1. Talk before community organization.....	82	85	72	40	y ³	1*
2. Attend meeting of civic club.....	60	38	61	32	m	2
3. Supervise sale of Red Cross seals.....	59	65	50	51	y	3*
4. Preside at public meeting.....	58	50	46	39	y ²	2
5. Arrange social entertainment.....	57	61	52	56	y ³	3*
6. Promote Americanization Week.....	49	38	41	44	y	2
7. Cooperate with Farm Bureau.....	46	38	30	15	y ²	3
8. Assist citizens prepare papers and addresses.....	37	29	31	24	y ³	3
9. Take part in community play.....	33	31	32	20	y	2
10. Promote drive to raise improvement moneys.....	31	21	30	12	y	3
11. Promote community economic enterprise.....	30	18	22	17	y ²	2
12. Serve on local lyceum course.....	30	26	19	2	y	3
13. Assist Community Chest workers.....	28	14	29	30	y	2
14. Promote Community Day program.....	25	26	22	25	y	3
15. Arrange community picnic.....	24	24	19	32	y	3
16. Schedule events for community hall.....	16	28	19	7	m	3
17. Plan gala day decorations.....	14	9	9	27	y	0*
Average.....	40	35	34	29		

*More than one half of the judges assigned this value.

TABLE XV. ADMINISTRATIVE DUTIES PERTAINING TO MISCELLANEOUS EXECUTIVE ACTIVITIES
(Tabular arrangement and symbols as in Table XI.)

DUTY	Percentage of Administrators Performing				Median Frequency	Median Value
	Supt.	Gen. Prin.	H. S. Prin.	E. S. Prin.		
1. Make special State report.....	89	85	86	46	y	1*
2. Drive car on school business.....	85	71	66	54	w	2
3. Prepare letter of sympathy.....	85	49	49	41	y ²	2
4. Make report for U. S. Bureau of Education.....	84	65	81	20	y	1*
5. Conduct visitors through schools.....	83	82	89	68	m	2
6. Examine sample of school work sent to office.....	80	71	75	66	m	2
7. Facilitate inspection by county and state officers.....	78	70	68	39	y	1*
8. Prevent agent canvassing school.....	77	76	73	56	y ⁴	1*
9. Make report for county superintendent.....	75	88	57	44	y	1*
10. Confer with secondary principal.....	73	20	19	20	w	1*
11. Entertain visitors.....	73	64	75	54	m	2
12. Confer with State officers.....	72	65	60	12	y ²	1*
13. Confer with county officers.....	71	74	64	29	y ⁴	1*
14. Award trophies.....	69	64	82	46	y ²	2
15. Confer with elementary principal.....	63	29	43	22	w	1
16. Direct care of school visitors.....	62	65	67	56	m	2
17. Loan books.....	62	59	61	63	m	3
18. Make record of books loaned.....	47	46	42	61	m	3
19. Do detective work.....	43	35	41	44	y ³	3*
20. Supervise soliciting among the student body.....	43	46	41	17	y ²	3
21. Solicit tuition pupils.....	40	29	30	10	y	3
22. Walk to various schools in district.....	40	18	14	22	w	3
23. Complete absent teacher's report.....	36	38	43	54	y	3
24. Confer with traffic officer.....	32	32	37	44	y ²	2
25. Solicit town for prizes.....	26	18	19	12	y	3*
26. Meet with county board.....	24	12	9	7	y	1*
27. Conduct thrift campaign.....	22	18	23	46	y	3
28. Confer with superintendent.....	12	55	78	85	m	1*
29. Notify fire department of fire.....	6	5	5	7	y	1*
Average.....	57	50	52	39		

*More than one half of the judges assigned this value.

of church and special welfare duties are considered to be of little or no administrative value. There was, moreover, a quite general unanimity of opinion among the judges to this effect. The opinion of 50 experienced judges in connection with some of these duties deserve special comment. The judges, for example, placed a distinctly low value on the duty, *Teach Sunday school class*. They were about evenly divided as to whether it was of little or of no vocational value to the school executive. They voted with practical unanimity that there is no administrative importance whatever attached to the duties, *Fill absent pastor's pulpit* and *Assist with summer Bible school*. The highest values were assigned to such speaking engagements as *Speak before Boy Scout meeting*.

(3) Civic Duties

Public-school administrators perform 17 civic duties in connection with their official positions. These duties are exhibited in Table XIV. As a whole, these duties are rated considerably higher in the matter of administrative value than the church and welfare duties listed in Table XIII. Practically one half of them were voted to be of average or greater administrative importance and of them, *Plan gala day decorations*, was judged to be of no importance. Moreover, most of the civic duties received a considerable number of votes as being of first importance.

Here, again, there is little need for special detailed comment. An examination of Table XIV reveals few significant differences among the several types of school executives represented. For the most part, the principals, particularly the elementary-school principals, perform these duties less commonly than the superintendents. The elementary principals exceed all others in the fairly important duty, *Assist Community Chest workers*, but discount this praiseworthy activity by leading two to one in the valueless duty, *Plan gala day decorations*.

(4) Miscellaneous Executive Duties

Finally, there is an important group of miscellaneous administrative duties which fall to the executive in charge of the various units of the school program. Twenty-nine of these are listed in Table XV, which exhibits the various percentile performances on the part of administrative officers and the values assigned to them by 50 judges.

Naturally, but few significant generalizations can be made concerning a group of miscellaneous duties. Attention should be called to the fact that a conspicuously large number of these duties are considered to be of first importance, that they include a wide range of executive activity, and that as a group they are quite generously performed by all types of executive officers. The detailed facts of Table XIV are well worthy of the special attention of the reader, but the necessity for conserving space prevents further comment by the author.

(To be continued)

CAN SCHOOL-BUILDING COSTS BE CUT?

Costs can be cut in many instances. This can be brought about by more careful preliminary studies of needs; by eliminating unnecessary expense with reference to ventilating systems; by utilizing classroom all periods each day; by eliminating of waste or little used space; by having building flexible and so arranged that any part may be used for almost anything or that adjustments can readily be made in case building is extended according to some unit plan; by avoiding little used basement space; by proper orientation and properly fitting the structure to the site; by reduction in expenses for ornamentation; by so planning the structure that standard or stock materials — timbers, glass, window frames, etc., may be used; and by the elimination of all possible graft.—Roy R. Roudebush, Indianapolis, Ind.

Some Practical Problems in Connection with School-Building Planning

H. W. Schmidt, State Supervisor of Buildings, Department of Public Instruction, Madison, Wis.

The problems confronting both school administrator and school architect in connection with planning school buildings are assuming proportions which were not thought of in the good old days when schools were planned from the the outside in and when cubic foot costs rose to the unprecedented figure of sixteen cents. In spite of the proverbial conservatism of the schoolman, progress here has been made as a matter of spontaneity and from within. But the problem of enormous cost increases along all lines connected with schools has forced those in charge of school affairs to watch their steps.

It is now almost bromidic to call attention to the fact that school-building planning is a highly specialized job worthy of the best thought, and that many excellent and reputable architects are not always in a position to plan school buildings either judiciously or educationally efficient. This statement is made without bias or prejudice. The problems are so intricate and involved that a simple disposition of steel, brick, and concrete no longer suffices. The highest skill is needed to develop a perfectly harmonious building where artistic appearance and tendency not only wait upon a well-planned and arranged interior, but emphasize each feature so that the completed structure will serve to the best advantage its intended function. It is no longer necessary to erect educational factories or to develop a schoolhouse appearance; there is nothing incompatible between a school building and a pleasing-appearing building devoted to school purposes. Would that this were taken more to heart by school officials, as well as by some designing architects. And it is not often a matter of expense either, let this be understood.

It is not the intention of this article to deal with the problems of schoolhouse planning in a highly technical manner, or to go into constructional details and defend certain standards of engineering practice, but rather to call attention to certain features of the work which may be brought to the attention of school officials in a very understandable and practical way. Some of those to be mentioned are of considerable importance to both designer and school official and must be settled in advance of actual planning.

Planning for Flexibility

It goes without saying that flexibility in planning and construction is a most important consideration. This term refers to two features which are being rapidly recognized as necessary. One is the erection of the school buildings on the "unit" plan. That is to say, the immediate needs of a school-building program must be satisfied in actual construction at the time of planning; however the building is usually developed to meet future needs in the form of extensions. The original structure is the first unit or units to which additions are built as future expansion requires. A word of caution here. A long experience with school-building-plan checking has shown that the future units are treated quite off-hand very frequently. "We'll add a few rooms here;" "If necessary we will rip out this toilet and make it into a corridor and there you are," etc. Yes, *there you are, quite often—not*, to borrow from our slang vocabulary. School officials should insist upon these future extensions, or units, being quite definitely blocked out in the original plan as a whole. This will prevent mistakes and misunderstandings and will safeguard the interests of the architect. Pointing out future schemes with a forefinger or a gesture will not do here.

The second feature of flexibility is that which concerns room spaces and arrangements. The modern skeleton type of construction lends itself admirably to this flexibility. Partitions are no longer bearing ones, except at times those of cor-



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ridors or fixed spaces. This permits changes in room arrangement and sizes to be made very readily, thus accommodating changing school organizations and curricula, for neither is happily fixed and "it does not yet appear what they shall be." Thus is progress. For example, the change to various plans looking to increased individualism, different types of recitation work, the laboratory form of instruction, the Dalton and the Winnetka plans, etc., all may call for a different type of classroom or sizes than those now considered satisfactory. No plea is made here to conform to the newer forms of activity, which are still in the experimental stage and need much more development before they will be used as standards. Nevertheless, authorities should look ahead in these matters.

A rather recent occurrence in this connection will be of interest. A certain twelve-room building was to be developed as a combination elementary school and junior high school. The superintendent felt that a change looking toward increased size of classrooms was likely to take place in a few years; in fact it was desirable to permit such an increase at present for certain types of work. The suggestion was made that the plan provide for rooms 22 ft. by 39 ft. in size. For ordinary work the rear of the rooms was utilized as a cloakroom space, by using storage cases about 6 ft. high and 22 in. deep, placing hooks on the back wall of the room and on the rear of the cases. The cases were movable. When a change in the size of the rooms was desired the cases were moved by some husky lads or the janitor's staff, thus adding about five feet to the length of the rooms. The scheme has proved very satisfactory in practice.

Provisions for Extended Use of Buildings

At this time it may not be amiss to mention the matter of extending use of the school plant, referring to uses such as evening classes, community gatherings, use of gymnasiums for men and women of the community, club gatherings, etc. A rather comprehensive study of the subject has been made by Eleanor Glueck, which is instructive.¹ In an astonishing number of instances very little or no attention has been paid to this feature or provisions made for them in planning, even in quite large and pretentious buildings recently planned. It seems that in some cases school officials feel that the school building

is more or less sacred to day-school use or they have a kind of personal ownership in the plant, or that extended use will injure the building. Happily these are in the minority but they do exist. It is hardly defensible to erect an \$800,000, or even a \$150,000, public building which is used but seven hours out of a 24-hour day. Therefore it is obvious that some, nay many, provisions for the use of the building outside of school hours should be made.

To be quite specific: A certain school building, housing about one thousand pupils of high-school grades, had some provisions made for a public-library station, which, by the way, was not readily accessible to the general public, but at least it was there. The building also contained good quarters for administration work, both for the principal and the superintendent of schools, as well as for the board of education. The joke was that the heating and ventilating layout was such that the whole plant had to be operated to serve these public offices on Saturdays and after-school hours when inclement weather set in. The rooms were not used at these times to the detriment of the officials and the school system as well. It took much persuasion to have separate steam lines run and unit-room-ventilation units installed. Fortunately, the gymnasium and auditorium were treated as separate units in the original plans; otherwise no doubt the same condition would have existed. This is just another phase of the problem which must be borne in mind when developing the plans.

Classroom Sizes

The problem of classroom sizes also confronts both designer and school official, this aside from the previous consideration of flexibility. We cannot have a building in open construction and wait for educational trends to crystallize into fixed ones—they never will. So it becomes necessary to meet present conditions, at least as efficiently as may be. Of course, it depends upon the type of organization to be accommodated what the size of rooms should be. The discussion will confine itself to the class or recitation-room problem.

For elementary schoolrooms the maximum seating is usually conceded to be around 45. If we establish a floor space, over all, of from 16 to 18 square feet per child, we shall have fairly well determined the size of the room. For kindergarten work the areas are well above this figure. The width of the room is determined by a number of factors such as natural lighting, desk sizes, spaces accorded aisles, and such matters. It appears as that a width of between 22 ft. and 23 ft. should be accepted as correct. A width of 23 ft. will probably be most acceptable here, as it allows proper outside and inside aisles, and will accommodate the larger size desks in proper rows. For the primary grades this width is a trifle larger than necessary, but as the teacher activity calls for more pupil visitation, this extra space will be of advantage. In general, a room 23 ft. by 32 ft. will serve in nearly all cases without undue waste. The argument that has been made in the past, that 40 pupils is the maximum any teacher should handle, is no longer accepted in practice. We now know that with improved technique, proper supervision, and training on the job that a good teacher will handle an enrollment of 45 to advantage, in fact this number provides a wholesome challenge to her activities. A perusal of past files of such journals as the SCHOOL BOARD JOURNAL will show that in the main, room sizes are comparable with the above figures. In some instances we find widths in excess of those cited, such as 24 ft. and even 25 ft. This seems excessive, as the problem of adequate

¹(1) U. S. Bureau of Education, Washington, D. C. *Extended Use of School Buildings*. Eleanor Glueck, Bulletin 5, 1927.

lighting of rows removed from the windows enters in, as well as the fact that construction costs are not proportionate to the width of floor spans but increase disproportionately as spans increase.

In the junior-high-school field the room sizes are approximately the same as for elementary schools, with a slight tendency to a reduction. Many plans show rooms about 22 ft. by 28 ft. or 23 ft. by 30 ft. These rooms are suitable for classes of about 35, which number seems to have found favor with the departmental type of instruction in vogue in these schools. Here, as in the senior or four-year high schools, to be treated in a subsequent paragraph, the seating capacity is somewhat dependent upon the type of seating provided. There is a definite tendency to replace the recitation desks with tablet-arm and recitation chairs. This will materially reduce the floor space required for seating and make for great flexibility, as chairs may be moved and changed from room to room as necessity arises and to meet the changing methods of instruction. A size of 23 ft. by 28 ft. will prove ample and yet allow each pupil 200 cubic feet of air space—for those who are sticklers for this requirement. There will be some saving in costs on this basis over that of buildings which have larger classrooms than those cited.

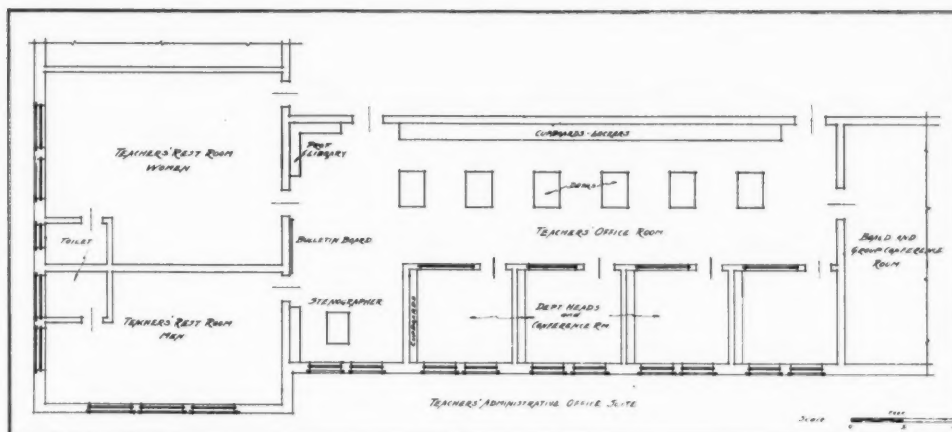
The senior-high-school situation is relatively similar. Seating arrangements and devices again play an important part in room sizes. There seems to be less agreement as to "standard" sizes, as a study of floor plans will show. The variation is from 20 ft. by 20 ft. to 23 ft. by 32 ft., with an apparent median of 22 ft. by 27 ft. Using recitation chairs. This size will seat up to 40 pupils, and will give to 35 pupils their 200 cubic-foot quota. If tables are provided, or the laboratory plan is used, the sizes indicated must be increased. Ordinarily a 16 sq. ft. basis per pupil will give good working space.

It may be questioned if the run of classes will go as high as 35 pupils. It may be necessary, at times, to provide for this number, but it is by no means a median. Various studies, such as those by the committee on school planning of the N. E. A.², by Packer³ and others show that these medians vary quite a little with the size of the schools. The variation is from 11 pupils per class for very small schools (up to 50 pupils) to 24 per class for schools with an enrollment in excess of 700. In the largest cities with high schools enrolling 2000 or more, this figure will be slightly exceeded, but no records are available showing a median class size greater than 26. One may question whether all classrooms should be of a size to accommodate 35 or more pupils. It must be remembered that 30 pupils per class is conceded a fair load for any teacher to handle, in fact is the maximum prescribed by the North Central Association of Colleges and Secondary Schools and others interested in efficient teaching. This problem must therefore be solved on the basis of the size of school, administrative organization, type of organization, and a common-sense attitude of compromise.

Artificial Lighting

The problem of proper lighting of schoolrooms, both with natural and artificial lighting, has been presented so often and so clearly to school officials that little comment need be made except in one instance, interesting enough. Reference is made to the switching arrangements of the artificial lighting system. The inside row of desks is most deficient in natural light and artificial lighting is needed there more frequently than on the other seat rows. Yet, it has been found again and again that either all lights are controlled from one switch, or a zigzag arrangement is controlled by two switches. In either case, the arrangement is wasteful of current.

²Report of the Committee on Schoolhouse Planning, N.E.A., Washington, D. C.
³Housing of the High School Programs. Paul C. Packer, Teachers College, New York City.



A FLOOR PLAN OF AN OFFICE SUITE FOR TEACHERS

The inner row of luminaires should be controlled separately from the outside rows; in this way the lighting bill can be cut almost in half, provided one can get a teacher to cooperate in this direction. Shades half drawn and all lights turned on, with excellent light conditions outside, is no uncommon occurrence.

Efficient Use of Classrooms

At this point a problem intrudes itself which should be mentioned and frankly discussed. There is, or may it be said, there has been a definite tendency to assign a separate classroom to each teacher, for reasons which are quite obvious and easily understood—a "home" for the teacher. This aside from the home-rooms, so called. This means that in a seven-period day a classroom will never be used more than five periods, and sometimes not over four periods per day. The balance of the time the room is usually vacant or used by the teacher for study, consultation, etc. On the other hand it is questioned whether it is a sound policy to permit valuable classroom space to lie practically idle for an appreciable period of the school day, or to provide the extra rooms needed at a cost of from \$4,000 to \$5,000 per room. With mounting school costs the question has much force.

An argument has been made that if an attempt is made to use classrooms up to their time capacity that "The teachers object"; "They do not like it"; "They have no place to go"; "They cannot prepare for their work"; "They will loaf"; etc. No doubt there are some, may be many, who do not like it or who object; it may be a good thing to permit a teacher to "loaf"—teaching is a hard enough task. It is, of course, true that such classroom use will necessitate itinerant teachers and the problem does arise where many teachers go in the interim, when not engaged in actual teaching. Providing teachers' restrooms does not seem to suffice.

An Administrative Device

There is presented herewith a scheme which may serve as a solution to the problem. It is probably not entirely new to some, but will likely be so for many readers. It is one in its arrangement and no plans have been seen which incorporate this scheme. It is proposed to develop a teachers' administrative suite to serve those teachers who are "deprived of their rooms," and any others who feel the need or the necessity to avail themselves of the facilities offered for real study, organization work, consultations, or even "loafing," as the mood may be. The diagram given herewith illustrates the scheme. The floor space was taken bodily from a plan recently published in a well-known magazine. In brief, there is provided a rather large room, with a series of smaller ones serving as consultation rooms, a series of individual office desks, a library alcove for a professional library, the faculty stenographers' quarters, access to a large consultation or conference room, and in addition restrooms for women and men teachers. Lockers and private cupboards are also furnished teachers.

These rooms, of course, may be arranged in a number of ways to suit local conditions and the desires of the school officials. In some instances, they may be adjacent to the principal's office suite, but in the writer's opinion, it will be better to remove them from these quarters to allow for perfect freedom on the part of the teacher. This comment is made without preconceived notions but is based on long experience both as administrator and teacher. Telephone communication with "headquarters" will be available and seems sufficient. The consultation rooms are provided with obscured glass partitions, permitting plenty of light for the inner rows of desks. If the location is on a top floor, then skylighting may be resorted to if found necessary.

Aside from the fact that recitation-room space is saved, another advantage is evident so far as the teachers are concerned. Coming into contact with quarters which possess and express a professional air is apt to make for like-mindedness on part of the teacher. Access to a professional library, a workmanlike environment, a quiet place to study and prepare for future work, all will probably subconsciously influence the individuals in desirable directions. This does not deny the necessity for an easy-chair, or rocker, or even a couch, when physical and mental relaxation call for satisfaction. This situation is taken care of by the restrooms adjacent to the suite. The consultation rooms permit this type of work in an acceptable manner, with access to a larger room for extended conferences with large groups.

Financial Gains

Let us examine for a moment what this scheme will entail if there are any other advantages accruing aside from those just stated, which are, of course, more or less subjective but no less real. Let us see, too, if there are any advantages in a financial way which will warrant accepting this scheme as it is?

A certain plan, a bona fide one, calls for 39 classrooms in addition to laboratories, vocational rooms, etc. The school has a seven, 45 minutes net period day. These 39 classrooms have a daily period capacity of 273 on the basis of this program. On the individual room-teacher basis this number dwindles to 195 periods, a difference of 78 class periods per day. This is equivalent to a little over 11 classrooms of space. The number of classrooms used every period of the day would then be 28, on this assumption. The space occupied by the teachers' suite is equivalent to two classrooms, in fact a little less. The other rooms of the suite, restrooms, and conference room, were already provided for in the original plan. The net saving is therefore nine classrooms, which in the building in question makes for a saving in construction of \$57,000. This is, of course, the over-all cost as given by the architect, and as taken off the plans on a cubage basis. In another way it means that the building capacity is increased by about 350 pupils if the original over-all content of the building were preserved and the teachers' suite incorporated. In the case

State Systems of Taxation for Public Schools

II. The North Carolina Plan¹

Fletcher Harper Swift, Professor of Education, University of California

Introduction

Of the many interesting economic and educational developments of the present generation, none is more significant than the educational renaissance which began in the south more than twenty-five years ago, and which, during the last ten years, has reached such proportions as to attract the attention of educational leaders throughout the nation. It is doubtful if any state has played a more important or more intelligent part in this industrial and educational renaissance than North Carolina. How rapidly this state has awakened in recent times to her industrial and economic potentialities is revealed in the growth of her industries and manufacturers. During the biennium 1921 to 1923 alone, the number of establishments manufacturing cotton goods increased 28 per cent, the wages earned by operatives in such establishments, 35 per cent, and the value of cotton products 43 per cent. In 1926, North Carolina stood second only to Massachusetts as a producer of cotton goods and led the nation in the production of tobacco. Hand in hand with this industrial growth has gone an enlargement of educational vision and policies, which has expressed itself not merely in an increase in the number of public schools and in public subsidies provided, but in what is perhaps even more significant, namely, a serious attempt to give all educational problems, including that of support, careful scientific study, and in the light of such study, first, to formulate and then put into operation new and better policies.

The result of these better and more generous policies are strikingly revealed in many concrete and tangible facts, among which at least two may be mentioned, namely, that between 1900 and 1926 the percentage of school population (5 to 17 years of age) enrolled in school increased from 63.6 per cent to 88.4 per cent, and the average number of days schools were in session throughout the state from 71 to 134.

However, it is not the purpose of the present article to consider the social and educational changes which have characterized the history of North Carolina during the last decade, but rather to describe the methods adopted by the state in her effort to provide more adequate support for her public schools. It will be helpful, if before entering into the details of this system, a brief statement is made of some of the more unique features of her plan of state support.

Unique Features—Appropriations versus State School Taxes

A question of long standing and still unsettled is, which is the sounder and more satisfactory method of providing state revenues for public schools: the levying of a state tax on the proceeds of which the schools have a definite claim, or providing in lieu of any such tax, appropriations payable from the state's general fund. North Carolina, like California, formerly derived state school revenues from the proceeds of the general property tax levied specifically for the benefit of public schools. At the present time, however, she levies no state tax of any sort specifically for schools, but instead makes generous appropriations from her state general fund. However, the history of the legislation which resulted in the adoption of the present policy shows clearly that the taxes now contributing

to the general fund were created at least in part with the definite purpose of providing school revenue.

At a general election in 1918, the voters of North Carolina approved a constitutional amendment providing for levying a state-graduated income tax subject to certain exemptions. By the year 1920, the proceeds of the state income tax, together with other state revenues were sufficient to enable the state to discontinue levying any state general property tax. As a result of this situation, the legislators of 1921 passed an act discontinuing the state general property tax, reserving to counties and other local political corporations the right to levy general property taxes.²

The major sources from which the state general fund is derived are income taxes, inheritance taxes, corporation taxes, business-license taxes, departmental, and miscellaneous fees. The general character and relative importance of each of these sources will now be considered. However, before entering upon this consideration it should be noted that for a number of years, each succeeding legislature has enacted a complete revenue law which differs little from the law enacted by the preceding legislature, except as to variation in tax rates.³ The provisions and rates presented in the present chapter are those provided by the revenue act of 1927. It must be borne in mind that the receipts presented in Table I and elsewhere in this study were derived from rates provided by earlier laws.

Income taxes. The state levies taxes upon the net incomes of residents of the state and upon that portion of the net income of nonresidents which is earned within the state. In the case both of residents and of nonresidents, the law provides for certain specific exemptions. Upon that portion of net incomes not exempted, are levied taxes varying from 1¼ per cent to 5 per cent, the rates being graduated according to the amount of the income. Corporations organized under the laws of the state, pay an annual income tax equivalent to 4½ per cent of their entire net income. Foreign corporations, doing business in North Carolina, pay an annual income tax equivalent to 4½ per cent of the portion of their entire net income earned within the state.

Inheritance taxes. North Carolina levies taxes upon all inheritances excepting so far as

exemptions are provided by law. The rates vary from 1 per cent to 16 per cent, graduated according to the degree of relationship of the beneficiary and the size of the inheritance or transfer.

Corporation taxes. (Schedule "C"). Upon every corporation doing business in the state, North Carolina levies a franchise tax for the privilege of exercising corporate rights and privileges given under charter. The bases and rates of such taxes vary with different classes of corporations. Most corporation taxes are collected under the authority of the state tax commissioner of revenue and by him paid over to the state treasurer. However, taxes on insurance companies are paid to the insurance department and appear in the state records as a credit from this department (See Table I).

Business license taxes. (Schedule "C"). The section of the law providing for business-license taxes covers some forty pages and enumerates an extensive list of business activities for the conduct of which within the state, license or privilege taxes must be paid.

Departmental and miscellaneous fees. For various services rendered, or privileges granted by state officials and departments, the state requires the payment of fees.

Analysis of state general revenue fund. The receipts derived from the various types of taxes and fees described in the preceding paragraphs and credited to the state general revenue fund for the year 1925-26 are shown in Table I. This table shows the sources contributing to the general fund and the amount and per cent of such fund which each source furnished (see Table I).

TABLE I Analysis of Receipts Credited to North Carolina State General Fund, for the Year 1925-26 ¹		
Source	Amount	Per cent ²
Income taxes.....	\$ 6,054,757.12	46.7
Inheritance taxes.....	843,459.30	6.5
Corporation taxes		
Franchise taxes collected under Schedule "C".....	1,768,151.55 ³	13.6
Collected by insurance department	1,266,670.31	9.8
Business license taxes (Schedule "B")	1,193,661.83	9.2
Departmental and miscellaneous fees.....	857,732.66	6.6
State prison collections.....	428,515.51	3.3
Railroad dividends:—		
Atlantic and North Carolina Railroad and North Carolina Railroad.....	254,345.00	1.9
Interest on bank balances..	270,967.68	2.1
Miscellaneous minor receipts	38,718.01	0.3
	\$12,976,978.97	
Less imprest funds for bad checks.....	4,800.00	
Total general fund revenue	\$12,972,178.97 ⁴	100.0

¹North Carolina State Auditor, Annual Report, 1926, p. 97.

²Computed.

³Included in this item are the proceeds of two taxes amounting to \$142,434.93.

⁴This total does not agree with the total as given by the auditor. The error appears to be in the total listed "state treasurer's miscellaneous revenue, collections net," as given by the auditor.

From Table I it is evident that by far the most important source of the state general revenue fund is the income tax, which furnished nearly one half of the moneys composing the general fund in the year 1925-26. Second in importance are corporation franchise taxes which, however, contributed considerably less than one third as large a proportion of the total fund as that derived from income taxes. In thus deriving the major portion of its general fund from the proceeds of income taxes, North Carolina occupies a somewhat unique position among the states of the Union, since in the majority of states which levy income taxes, such taxes fall considerably short of being the most productive source of state revenue, and in many cases are of relatively minor importance.



²This is the second of a series of articles on state systems of public-school taxation to be contributed to the JOURNAL by Professor Swift. The first of these articles appeared in the March issue of the JOURNAL. The data upon which the present article is based were collected by Mr. Bruce L. Zimmermann, graduate assistant in education at the University of California. The author wishes to express his indebtedness to State Supt. A. T. Allen of North Carolina, who gave the manuscript a careful reading, and in accordance with whose suggestions important revisions were made.

State School Funds

North Carolina maintains three state funds for the benefit of public elementary and secondary schools; (1) a permanent fund known as the literary fund; (2) a special building fund; (3) the state public-school fund.

Literary fund. By legislative act in 1825 North Carolina established her first permanent common-school fund known as the literary fund. Various sources were provided by law for increasing the principal of this fund with the result that in 1860 it amounted to something over \$2,000,000. However, this entire principal except for a few thousand dollars, was lost during the civil war and reconstruction period (1860-1870).⁴

The sources for increasing the principal of the fund which have been in effect since 1870, including the following: (1) The proceeds of all lands that have been or hereafter may be granted by the United States to this state and not otherwise appropriated by this state or the United States; (2) all money, stocks, bonds, and other property now belonging to any state fund for purposes or education; (3) the net proceeds of all sales of the swamp lands belonging to the state; (4) all other grants, gifts, or devises that have been or hereafter may be made to the state and not otherwise appropriated by the state or by the terms of the grant, gift, or devise.⁵ One source not included among those enumerated in the constitution has increased the principal of the literary fund: an act passed in 1917 made available from bond sales as much as \$500,000 for use by the state board of education in aiding in building public schoolhouses in the state. \$333,000 in bonds were sold and added to principal of the state literary fund.⁶

Literary fund used as building fund. Both the accumulated principal and the interest of the literary fund are now loaned to the counties for the purpose of aiding them in the erection and equipment of schoolhouses. Loans made to the counties from this fund are payable in ten equal annual installments, bearing interest at the rate of 4 per cent per annum.⁷ The total indebtedness of counties to the literary fund was reported on June 30, 1926, as amounting to \$1,270,057.30.⁸

Special building fund. By an act passed March 17, 1921, North Carolina provided for a state bond issue of not over \$5,000,000 for the purpose of creating a special building fund, to be loaned to county boards of education to aid in the erection and equipment of schoolhouses. The law provided that no loan shall be made for a building of less than seven rooms, and that plans for any such building must have the approval of the state superintendent of public instruction.⁹ The counties are required to pay upon such loans the same rate as that paid by the state upon the bonds issued to provide the fund.¹⁰ As a result of bonds issued under acts of 1921, 1923, and 1925, the total amount loaned to counties from the special building fund was reported as amounting, on June 30, 1926, to \$15,048,000 and the total indebtedness by counties to the state board of education amounted, on June 30, 1926, to \$13,740,300.¹¹

⁴For a more complete account of this fund see—Fletcher Harper Swift, *A History of Public Permanent Common-School Funds in United States*, pp. 361-364.

⁵Constitution, Art. IX, sec. 4; here quoted from North Carolina Public School Law, 1923, pp. 1-2, sec. 6; *Ibid.*, p. 7, sec. 9a.

⁶Public Laws for North Carolina, 1917, pp. 303-305, ch. 154.

⁷North Carolina Public School Law, 1923, p. 7, sec. 9a; *Ibid.*, pp. 70-71, Art. XXIV.

⁸North Carolina State Superintendent of Public Instruction, Biennial Report, 1924-26, Part III, p. 193.

⁹Fletcher Harper Swift, *Biennial Survey of Public School Finances in the United States, 1920-1922*, Bureau of Education Bulletin, 1923, No. 47, p. 10; North Carolina Public School Law, 1923, pp. 71-75; Art. XXV; Public Laws of North Carolina, 1925, pp. 441-447, ch. 201.

¹⁰North Carolina Public School Law, 1923; pp. 71-75, Art. XXV.

¹¹North Carolina State Superintendent of Public Instruction, Biennial Reports, 1920-22, p. 184; 1922-24, p. 272; 1924-26, (Part III), pp. 190-193.

TABLE II
Analysis of Expenditures from North Carolina State Public School Fund—1925-26¹

Purpose	Amount	Per cent ²
Equalizing fund		
Apportionment to counties.....	\$1,499,750.00	
Commission expense	250.00	77.9
Teacher training fund		
County summer schools	13,575.00	
Rural supervision	39,181.50	
Teacher-training in negro schools	13,250.00	66,006.59
Standard rural high schools		3.4
Rural high schools	82,600.00	
Teacher-training units in rural schools	21,900.00	104,500.00
		5.4
Rural libraries.....		3,550.00
Vocational education		138,857.99
		7.2
Administration and supervision		
Division of negro education	15,000.00	
Division of publication	3,770.26	
Division of school inspection	19,000.00	
Division of school organization and civics	20,301.87	
Division of teacher training	15,139.58	
Division of certification and finance	21,115.82	
Division of administration	19,001.27	
Educational commission ³	392.24	113,721.04
		5.9
		\$1,926,635.53 ⁴
		100.0

¹State Superintendent of Public Instruction, Biennial Report, 1925-26, Part III, pp. 194-195.

²Computed.

³No appropriation was made for the state educational commission. Funds were provided by a transfer from the division of school organization and civics (cf. Public Laws of North Carolina, 1925, p. 528, ch. 275 and footnote "1" above).

⁴The item of expenditure for vocational rehabilitation (\$11,589.79) has not been included in Table II which accounts for the difference in the total disbursements as presented in Table II and by the state superintendent of public instruction (see footnote "1" above).

Since neither the principal nor the interest of either the literary fund or of the special building fund is derived from the proceeds of any state tax, these funds will receive no further consideration in the present account. It should be noted, however, that the aid given to the counties from these two funds is solely on the basis of loans, and is therefore granted on an entirely different basis from that employed in apportioning most state school funds.

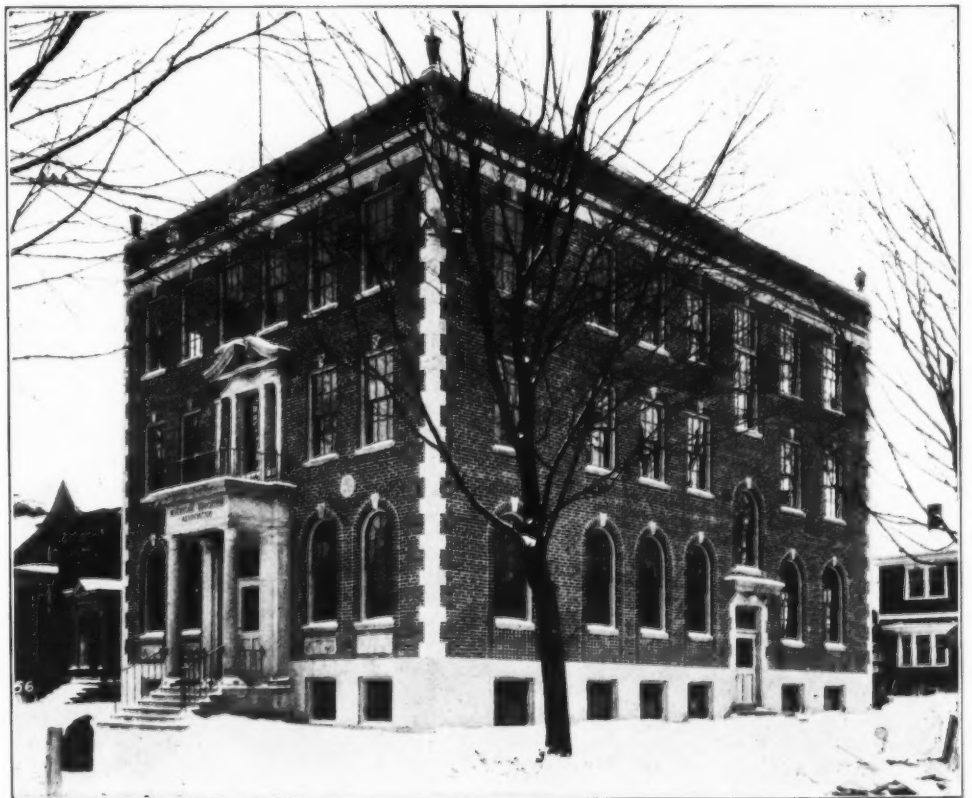
State public-school funds. The state public-school fund consists of all money derived from all sources provided by law, except the literary fund and special building fund, deposited in the state treasury for the support and maintenance of the public-school system. Except for certain negligible departmental receipts amounting to \$7,649, the only sources contributing to the public-school fund in the year 1925-26 are appropriations from the state general fund.¹² These appropriations for the year 1925-26 totaling \$1,975,250 were provided for thirteen specific funds, but were all credited to the public-school fund.¹³ One item credited to the state public-school fund, namely, \$15,000 for vocational rehabilitation obviously not for the benefit of public elementary and secondary schools will receive no further consideration in the present account and will not be included in tables presenting public-school moneys. Table II presents an analysis of expenditures from each of the funds appropriated to the state public-school fund. The analysis shows the purpose and amount of each expenditure, payable from the public-school fund for the year 1925-26, and the percentage which each amount was of the total expended from the public-school fund for this year.

State Taxes as Sources of School Revenue

It has been already noted in preceding paragraphs that no portion of the literary fund and of the special building fund is derived from state taxes. On the other hand, the state public-school fund—made up almost entirely of appropriations from the state general fund—in view of the origin of the moneys contributing to the state general fund, must be regarded as in the last analysis largely derived from the proceeds of state taxes. The taxes contributing to the state general fund, and the proportion which each type of tax furnishes, have been shown in Table I. By a comparison of the data presented in Tables I and II, it will be seen that the expenditures for public elementary and secondary schools consumed approximately 15 per cent (14.85 per cent) of the total receipts credited to the state general fund.

¹²North Carolina State Superintendent of Public Instruction, Biennial Report, 1924-26, Part III, pp. 194-195.

¹³Public Laws of North Carolina, 1925, p. 528, chap. 275.



THE NEW OFFICE BUILDING OF THE MICHIGAN EDUCATION ASSOCIATION, LANSING, MICH.

The State Teachers' Association of Michigan has its executive offices in the above building, which also provides space for the official paper of the Association and serves as a center of professional activities in the state. The building is fireproof and is the property of the Association.

The Function and Value of a Public-School Research Bureau¹

W. W. Theisen, Assistant Superintendent of Schools, Milwaukee, Wis.

The function of a public-school research bureau is primarily to collect and organize whatever data may be necessary or available for the intelligent solution of the problems of the school system. Just as in industry it is the business of the research department to make careful and accurate analysis of the facts, in order that the executive staff may plan more wisely for the success of the institution the task of the research department is to furnish information as the basis for an evaluation of administrative policies and teaching practices and to indicate their strength or weakness, and measures for their improvement. Whatever else it may be, the research bureau is primarily a fact-finding, fact-digesting institution. The job of the research bureau is to determine the merits of educational practices. This should be done not upon the basis of mere opinion, but upon the basis of objective evidence insofar as that evidence is to be had. Successful business concerns have long since passed the stage where new and important ventures are broached on a guesswork basis, but in every case endeavor to determine in advance the probable volume of business to be expected from a given expenditure. Unfortunately, in school administration, we are too often prone to act first, and to determine our facts afterward.

A proper respect for facts goes a long way toward eliminating that wholly unwarranted feeling of complacency which often exists, when school administrators are unaware of the true situation, or of its dangers. School boards and school executives in the past may have been guilty of the charge that they have assumed that all was serene and lovely with the schools. As a matter of fact, it was frequently noted that there was little real evidence to justify any such feeling. In many cases it was found that grave and serious errors of judgment had been committed. As proof of our errors we are confronted on the one hand, with overcrowded school buildings, inadequate playgrounds, large classes, outworn curricula, and underpaid teachers. On the other hand, we are likely to find inadequate funds and public reluctance to approve increases in the school budget.

To meet a situation produced by poor guesswork and shortsightedness, it has been necessary upon relatively short notice, to make unusual increases in expenditures. In many cases, this increase has produced a severe strain on public confidence, and only strenuous campaigning and high-pressure sales methods have made it possible to save the day. If there had been a more wholesome respect for the facts and a more sincere effort to determine what was actually needed long in advance, such crises could be avoided. Increases in budgets might have been made far more gradually, and with a far better understanding if there had been a recognition of the needs and purposes of such increases on the part of the tax-paying public. A research bureau, in its functioning, will discover the needs in terms of new buildings, additional salary appropriations, or other expenditures long in advance; in so doing it will enable the administrative staff to formulate and to secure the acceptance of plans for meeting the situation. Few cities are really too poor to support good schools, and few are unwilling to do so, if the need is properly presented. The problem of the research leaders is to assist in determining what is needed, educationally and financially, and to present the supporting facts required for an intelligent appreciation and understanding of the situation.

The Task of the Research Bureau

The business of the research agency, regardless of whether or not it is organized as a sep-

arate entity, is to aid the superintendent in determining the scope and nature of the job to be done. For instance, such facts as the probable enrollment that may be expected in the various divisions of the school system in years to come, the curriculum best suited to meet the needs of each of the various groups of children, the personnel and equipment needed, together with the revenues to be raised and their possible sources, represent data which every superintendent must have. Every superintendent, and every teacher, should inquire whether his educational output, in terms of pupil achievement and progress, represents a fair return on the money invested. The superintendent should inquire whether methods of teaching employed are such as to warrant him in expecting satisfactory results. He should ascertain whether the educational program is adequate for the needs of the community. He should know whether his system is as efficiently and economically organized as that of the better systems of schools. In his search for the answers to these questions, the department of research should render valuable assistance.

By keeping the superintendent and his staff accurately informed so that grievous errors of judgment may be avoided, and by pointing out the true achievements of the schools in ways that are easily understood, the research bureau can do much to forestall criticism, for criticism will then be met offensively rather than defensively. The work to be performed by a research staff is practically unlimited, for there is no phase of public-school administration or teaching which cannot profit by a judicious use of its services. Superintendents, with experience in research departments, research directors, and college professors familiar with the field of public-school research, upon being asked to state what they deemed were the functions of a city school research office, listed almost every conceivable problem likely to be encountered in running a system of public schools.

Types of Service the Research Bureau Should Render

In a paper like this one, the writer can barely touch upon some of the various types of service which, in the judgment of these competent critics, a research bureau should be prepared to render. There is, first, the whole field of instruction, which in most school systems is greatly in need of research service. There is a dire need for the evaluation of materials of instruction. Those responsible for the development of the course of study desire to ascertain whether the curriculum offerings are in keeping with present-day demands, what are the best practices at the various divisions and levels of the school system, what the objectives should be, and how generally they are accepted and followed by the teaching staff. As evidence of the demand for research in this field, we have such illustrations as the work done in Denver, St. Louis, and other cities, and the various yearbooks dealing with the curriculum. It is true that many of the published curriculum studies are scarcely worthy of being called research products, but, nevertheless, they bear witness of the fact that here is a fruitful field for research.

If textbooks are to be selected not upon the basis of impression, prejudice, political considerations, but strictly upon merit, their contents must be subjected to critical and searching analyses. When those financially or otherwise interested in a textbook adoption learn that superintendents and their associates are actuated solely upon considerations of merit, we shall probably witness fewer attempts to thwart their recommendations.

The research department must be prepared to render service in measuring the abilities and

achievements of pupils; in organizing and directing testing programs, and interpreting their results; in the development of new instruments of measurement; in the diagnosis of teaching difficulties; in the analysis of difficult pupil cases; in the study of problems of educational guidance; and in the evaluation of methods of teaching. Probably one of the most significant functions of the research department is to stimulate teachers and others to undertake research investigations of their own, and to advise and direct them in the solution of problems which grow out of such studies.

On the administrative side, studies of population, child accounting, and teaching personnel must be made. In matters of finance, the superintendent must endeavor to discover whether the school district's money is being well spent, whether it is receiving a fair return on its investment, and if not, how such conditions may be brought about. He should know whether the school budget is well proportioned and balanced; whether the division of funds between business and educational activities is a reasonable one; whether the amount spent for overhead is too much or too little; or whether the district is spending so much on certain activities that others must go short-handed. He should know whether the unit cost in each of the various divisions of the system is defensible; which parts of the system are wasteful, and which ones represent good use of money; which subjects are expensive and where the expensive classes are; what changes in organization or policy ought to be made in order to reduce exorbitant costs. Are we paying too much for our school buildings? Does our school-building construction and use represent good economy, in terms of space utilization or service, as well as cost? How much ought we to spend for new buildings in the next five or ten years?

If we are planning a building program it may be important to know the facts with reference to changes in birth rate. When the annual birth rate in a city of 500,000 in 1928 is found to have dropped from 274 for every 10,000 of total population, as it was before the war in 1913, or from 236, as it was in 1920 to 204, it is evident that the need for school facilities is changing, to say nothing of important social considerations. Translated into terms of building needs it means that, other things being equal, a city of that size can reduce its annual school-building program by 40 classrooms, over that necessary in 1920.

We need to know also, whether our method of financing the building program is sound? What are the relative merits of a "pay-as-you-go" policy, as compared with a bonding policy? The superintendent should be able to show whether the school district is receiving its fair share of the tax money raised by the community. Is the community able to pay for the educational program it is asked to provide? The critics who demand an explanation for the rapidly rising costs must be given the answer. A recent study in a large western city, where an analysis and proper allowance had been made of (1) the actual growth, (2) the enlarged program of activities which the public is demanding, and (3) the decreased purchasing power of the dollar, shows it is only because of the many economies brought about in organization and management, that the schools are able to operate on so little money. The answers to all of these questions, as well as the presentation of the results of such studies in an effective manner, properly comes within the range of activities a research department should undertake.

The writer well knows that hundreds of cities have no research bureaus. I am not so much con-

¹An address delivered before the general session at the Department of Superintendence Meeting on February 26, 1929.

cerned that every city have a research bureau as I am that somewhere in the system there shall be persons who will find the answers to the questions as I have presented. In small communities the superintendent will need to do much of the work himself. In large communities there should be persons within the system trained in research methods, who can help to lift that burden from his shoulders. I doubt if we shall ever arrive at a satisfactory state of affairs until every executive officer, every supervisor, and every teacher has had some training in methods of research.

Division of Functions Between Bureaus

Not all of the research can, or should be, performed by city schools themselves. At present we need to agree upon a proper division of the field between local bureaus of research on the one hand, and university, state, or national bureaus on the other. Few local school systems are equipped, or can afford, to do all that should be done. If a local school system were to attempt to perform all of its own research, much unnecessary duplication would result. In the opinion of competent judges, studies based largely upon comparative statistics should be left largely to state, or national bureaus. In the interests of economy and service there should be centralized production of all comparative research, leaving to the local bureau the filling in of its own data. The splendid service which the research division of the Department of Superintendence has rendered, under the able leadership of Mr. John K. Norton, is an example of what may be accomplished through cooperative endeavor. While this bureau has been supported by funds of the Department, received from membership dues and subscriptions, the school boards of the country can well afford to assume the major responsibility for the support of such an institution. Even though this bureau has done splendid work, much more could undoubtedly be accomplished were it more liberally supported. That the executive officers of the Department of Superintendence recognize this is shown by the fact that they are endeavoring to create an endowment fund of \$1,000,000 for research purposes. Every one of the 500 or more cities of 10,000 population or over can well afford to spend \$100 annually for the services which an enlarged department would render. The larger cities can afford to contribute much more than this.

At this point I desire to say that one of the most severe handicaps under which the research division of this Department and all other bureaus making comparative cost studies must labor, is the lack of a uniform system of records. In spite of all that has been done thus far, records and accounting practices are still far from uniform. A shrewd observer can find serious flaws in almost any study of cost comparisons made between cities at the present time.

While the writer maintains that the research required by cities cannot all be performed by their own bureaus, it will still be insufficient if they receive help from national, or state bureaus. There is need of additional assistance from the colleges and universities. Ultimately, most of the research necessary for the scientific evaluation of material and methods of instruction, and for the development of new techniques in administration and teaching, will be delegated to the universities and colleges. We have not yet reached that stage, but many of our universities are already rendering splendid service in this direction. Not the least important is the work performed in training prospective teachers and administrators in methods of research. A number of the universities are rendering a helpful service in collecting and publishing summaries of the more significant research contributions, such as the University of Chicago in reading and arithmetic, for example, and such as the University of Michigan has accomplished for research carried on within its own state. However, if the university research bureaus and departments of education are to meet the needs of



FRANK H. WOOD
Albany, N. Y.

Mr. Frank H. Wood, who has been director of the department of school buildings of the state of New York for 24 years, has recently resigned, to become associated with Mr. Carl W. Clark as educational consultant in schoolhouse planning. Mr. Wood will have his headquarters at 12 East 42nd Street, New York City, where the firm has an office. Mr. Clark is an architect of high reputation and outstanding character, who maintains an office at Cortland, N. Y., and New York City.

Mr. Wood was graduated from Ives Seminary and from Syracuse University. After his graduation, he held a number of high-school principalships from 1885 to 1895, which was followed by his entrance upon a graduate course in school administration. In November, 1895, he was appointed inspector of training classes in the department of instruction, later serving as supervisor of training classes and chief of the bureau of inspection. With the consolidation of the several departments, he became chief of the inspections division and director of the school-buildings and grounds department. Since 1904 he had been in charge of the administration of the school-building code of the state.

In accepting a position as consultant in school building with Mr. Clark, Mr. Wood takes advantage of an opportunity which appeals to him for continuing his service to the schools in the work of schoolhouse planning. His long service for the state has brought him into intimate contact with the practical problems of schoolhouse planning both in cities and in rural districts. He has personally passed upon thousands of schoolhouse plans and has aided hundreds of school boards, superintendents, and architects in solving troublesome problems of financing, selecting sites, planning, and erecting new schoolhouses. To his leadership and initiative is due the wide acceptance in New York state of the idea that the educational scheme must underlie and determine every schoolhouse plan. The steady improvement in the standards demanded by the New York state code and adopted by school authorities in other states as a model is due to Mr. Wood's quiet work. Few men in the state department have endeared themselves to a wider circle of schoolmen of the state by modest, sincere helpfulness than Mr. Wood.

the public schools, they must be liberally supported by the schools and by the general public. On their part they must endeavor to make research contributions which are so practical that no school can afford to disregard them. To this end we must be willing to extend to them the use of some of our laboratory facilities in the form of actual classrooms, where experimental studies can be conducted under practical schoolroom conditions.

How Research Bureaus May be Improved

Not all of the problems of improvement will be solved by delegating work to national, state, and university bureaus. In the opinion of many persons, local bureaus of research can be improved by better internal organization. The lack of a sufficiently large staff is the common complaint of research directors. Superintendents who replied to the questionnaire were rather frank in suggesting that the best way to improve bureaus of research is to employ better people in them. I almost regretted that the research directors were not given a chance to express their opinion as to how superintendencies might be improved. The replies might have made interesting reading.

If a research department is to function properly, the responsibility for its direction should rest upon an individual whose rank is on a par with that of an assistant superintendent. Unless the person in charge is sufficiently high in rank, the position will lack the prestige necessary to create a proper respect for its authority. Without

such status there will be persons in every system who will question the right of a research director to probe into their particular domains. The director must have sufficient rank to enable him to meet any other employees of the school system at least on an equal footing.

A frequent source of complaint on the part of directors is the fact that they must perform too many administrative duties of a routine character. So long as this condition exists the highest type of service cannot be rendered. As one individual has suggested, the bureau must not be allowed to become a "catch-basin," but its director and staff must have time for creative thinking.

The relative emphasis to be placed upon administrative and instructional research is a matter of dispute. In past years many bureaus were largely bureaus for the administration of tests, and some appear still to be such. If much of the work in measuring the results of teaching could be left to supervisors directly responsible for instruction, and properly trained, research bureaus would have more time for the solution of the more pressing problems of the superintendent, as well as some time to think about original research problems. The replies from superintendents indicate that approximately one half of them feel that at least fifty per cent of the energy of a bureau should be devoted to administrative research. It is interesting to note that more than two thirds of the research workers state that they actually devote twenty-five per cent, or even less of their time, to administrative research. This indicates a significant difference of opinion as to the proper distribution of effort. A proper respect for the needs of the chief executive requires that directors of research should heed the practical demands of superintendents who are charged with the responsibility for the successful administration of the schools. Superintendents are far more interested in research that will assist them in solving their major administrative difficulties than they are in the minutiae of measurement.

An important fact in determining the value of a bureau's services is the success with which that bureau is able to form effective personal relationships with those with whom it comes in contact. It must be successful in forming cordial relations not only with every member of the local staff, but with board members, and business men of the community as well. The research bureau must "sell" its services. As one person has expressed it, "educational statesmanship as well as research technique is needed."

Another aspect which must receive more attention than it has in the past is the use that is made of facts, after they are found. Too frequently the results of important researches receive inadequate publicity. One of the immediate needs is to determine how we can make the results strike fire in the minds of those whom we wish to alter their practices or their attitude. Too many well-meaning citizens still form their opinions of the adequacy or success of the local educational program on incidental, or even trivial considerations. Do the children like to go to school? Do they like the teachers? Do the parents approve of the teachers' out-of-school conduct? Do the teachers enforce discipline in the school-room? The schools often are praised or condemned on the basis of the answers to such questions. Most of you could cite instances where the slightest provocation caused an upheaval that threatened to wreck the administration and sometimes succeeded. So long as public support of our educational program rests upon such insecure foundations, there is little hope for permanent educational advancement. The public must be taught to evaluate the schools in terms of such objective measures as our research agencies have produced. More thought must be given to methods of presenting and disseminating the fruits of research. As one specialist in education

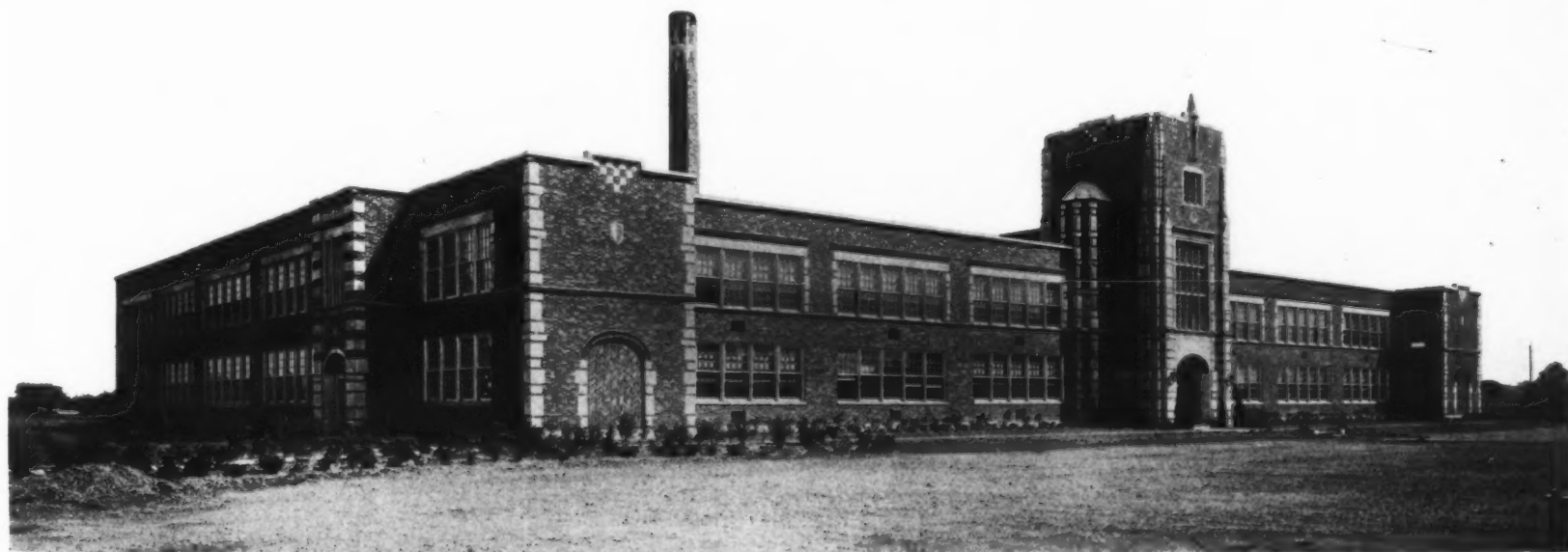
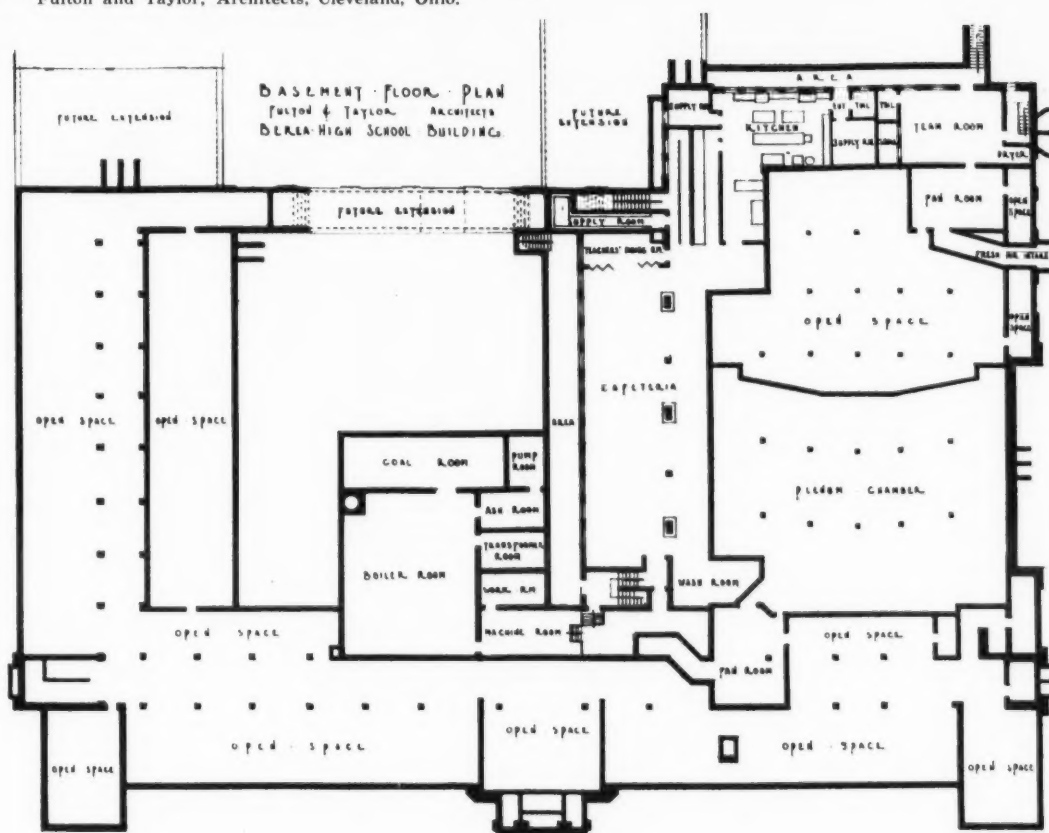
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FRONT ELEVATION, BEREA HIGH SCHOOL, BEREA, OHIO
Fulton and Taylor, Architects, Cleveland, Ohio.

THE BEREA HIGH SCHOOL, BEREA, OHIO
M. M. Berry, Superintendent of Schools

The new high school at Berea, Ohio, is the result of careful planning and construction on the part of the board of education. First, the board made a careful study of the needs of the district before the bond issue of \$650,000 was placed before the voters in the fall of 1925. Expert advice was obtained through the assistance of Dr. C. C. McCracken, professor of education at Ohio University, Columbus, who was employed to make a survey of the school district covering its present and probable future growth over a period of ten years. In the survey, Dr. McCracken determined on the size and style of the building needed to care for such a growth in enrollment. Additional assistance was obtained from Mr. A. G. Yawberg, superintendent of the Cuyahoga county schools, Cleveland, Ohio, who gave freely of his advice at different times as the building program progressed. Because of his broad experience in conducting school-bond issues and in checking and supervising plans and specifications for new school buildings, his suggestions were helpful and much appreciated. The arrangement of the various departments of the school, and the selection of the equipment, were handled by the superintendent of schools, Mr. M. M. Berry, to whom were referred all matters pertaining to the planning from the standpoint of administration.



FRONT AND WEST SIDE VIEW, BEREA HIGH SCHOOL, BEREA, OHIO
Fulton and Taylor, Architects, Cleveland, Ohio.



AUDITORIUM, BEREA HIGH SCHOOL, BEREA, OHIO
Fulton and Taylor, Architects, Cleveland, Ohio.

In the planning and construction of the building the board of education early sought the services of Architects Fulton & Taylor of Cleveland, Ohio, who prepared the plans and supervised the construction of the structure. That the board of education took its task seriously is evidenced by the fact that the entire board of five members, with the superintendent and architects, visited 24 different high schools, located in Columbus, Cleveland, Akron, and other cities in northeastern Ohio, with a view of obtaining first-hand information about school-building arrangements—the quality, value, and cost of building materials, kind of equipment, and modern teaching devices considered essential and desirable in a modern high school. This desire for first-hand information prompted the asking of questions connected with the building visited, so that when the time came to plan the structure and to prepare specifications for the building, there was a definite understanding of what was required, and the nature of the task to be performed.

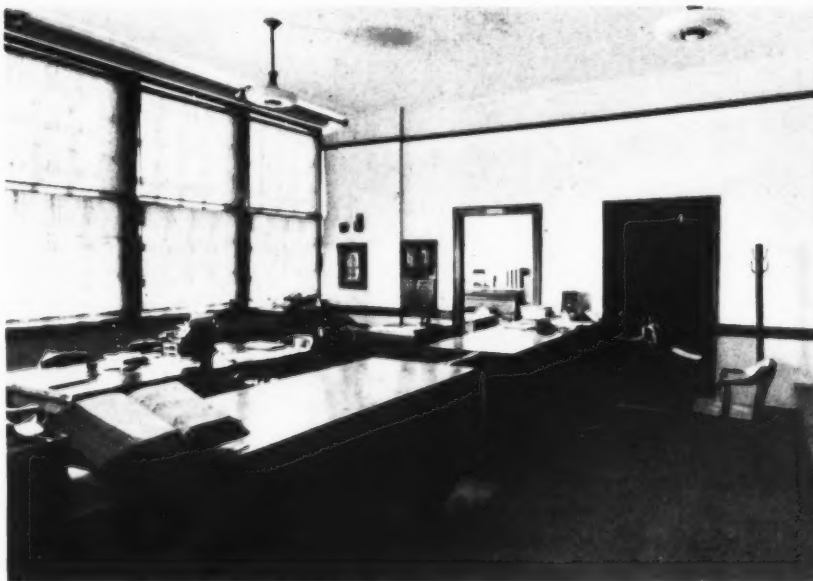
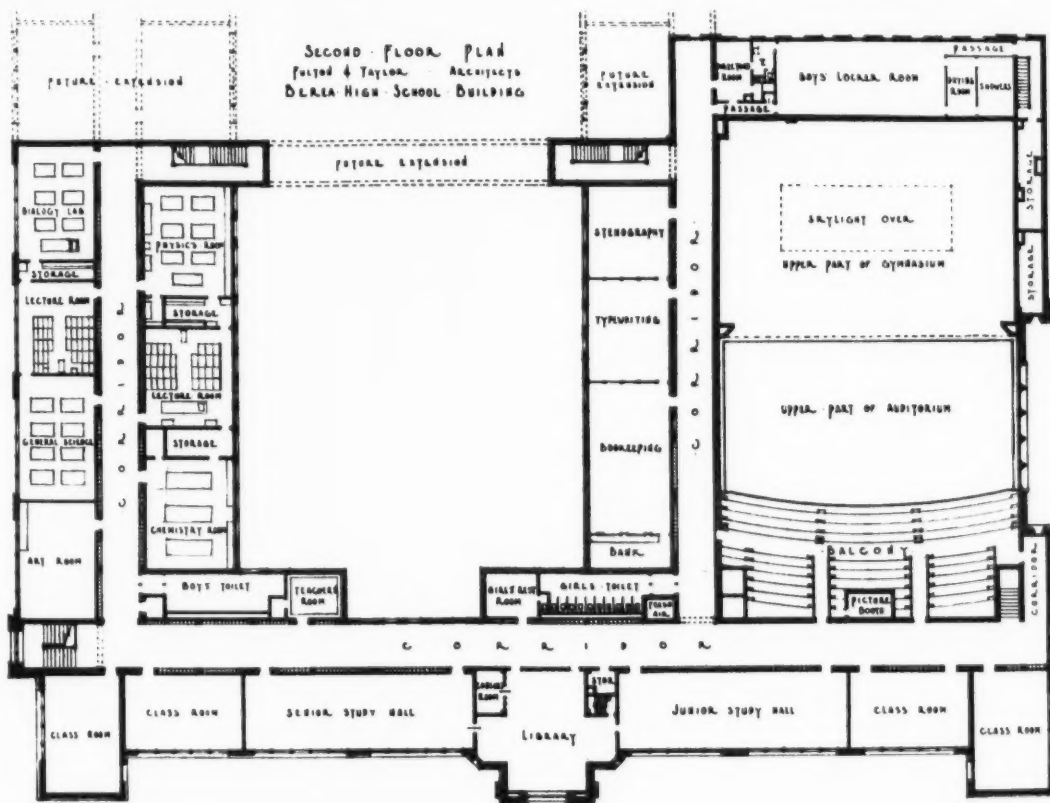
The Berea school district contains 25 square miles of partially rural territory lying adjacent to the southwest corner of the City of Cleveland. The new high school is located in Berea, a growing city composed largely of people who work in Cleveland. The site of the building is a flat tract of ground, located on the east side of the city, with its main highway front facing south. It is

well suited for a community and playground center.

The building is designed to accommodate an initial load of 1,000 pupils, or with certain program changes, a maximum of 1,500 children. The style of architecture is Elizabethan. The exterior dimensions of the building are 280 by 210 ft. The building is two stories high, elevated on a two-foot terrace. It is built of reinforced concrete and brick, with stone and concrete trim. The corridor floors are of quarry tile. All woodwork in the building is a good grade of dark oak, except the office, which is birch, finished in walnut. The woodwork and furniture in the domestic-science department and in the clinic are in white enamel finish. The floors in the classrooms are of maple; the offices and library have linoleum for floor covering. The walls and ceilings are plastered, with California stucco finish, except in the showers, etc., where hard, white enamel has been used.

On the first floor are the administration offices, comprising a general office, a superintendent's office, principals' offices, a waiting room, a conference room, and a vault.

The auditorium, which has a picture booth with projection machine, has a seating capacity of 1,150. The design and finish of the room are at once dignified and attractive, and the acoustical



INTERIOR OF OFFICE



MANUAL TRAINING ROOM

INTERIOR VIEWS OF THE BEREA HIGH SCHOOL, BEREA, OHIO
Fulton and Taylor, Architects, Cleveland, Ohio.

properties are excellent. Two rooms adjacent to the auditorium may be used for dressing rooms when required, and two rooms near the auditorium entrance are suitable for checking clothing.

The gymnasium has a large entrance lobby and there are locker and shower rooms, as well as a regulation basketball court.

Other rooms on the first floor include a domestic-science room with model dining room, a sewing room with model bedroom, a manual-training room with finishing and toolrooms, a machine-shop room, a mechanical-drawing room, and nine standard classrooms.

On the second floor are the library and book-storage room in the center of the building, a senior study hall equipped for 90 pupils, a junior study hall equipped for 100 pupils, a commercial department with bookkeeping, typewriting, and stenographic departments, a science department comprising a chemistry room, a physics room, a biology room, a general science room, lecture rooms, dark rooms, and storage rooms, an art room, the boys' locker rooms, and four standard classrooms. Each floor is provided with restrooms and toilets.

In the basement are located the boiler room, coal room, ash room, machine room, and a cafeteria, seating 300 persons and equipped with kitchen and storerooms for provisions.

Each typical classroom is 20 ft. 8 in. by 32 ft. 4 in. and is 12 ft. high, and equipped with 38 single desks and chairs, a teacher's desk, a wardrobe, a bookcase, a reading table, and three chairs. Natural slate blackboards, equipped with a cork border 14 in. wide are found on two walls. Bulletin boards are located along the top and end of the blackboards.

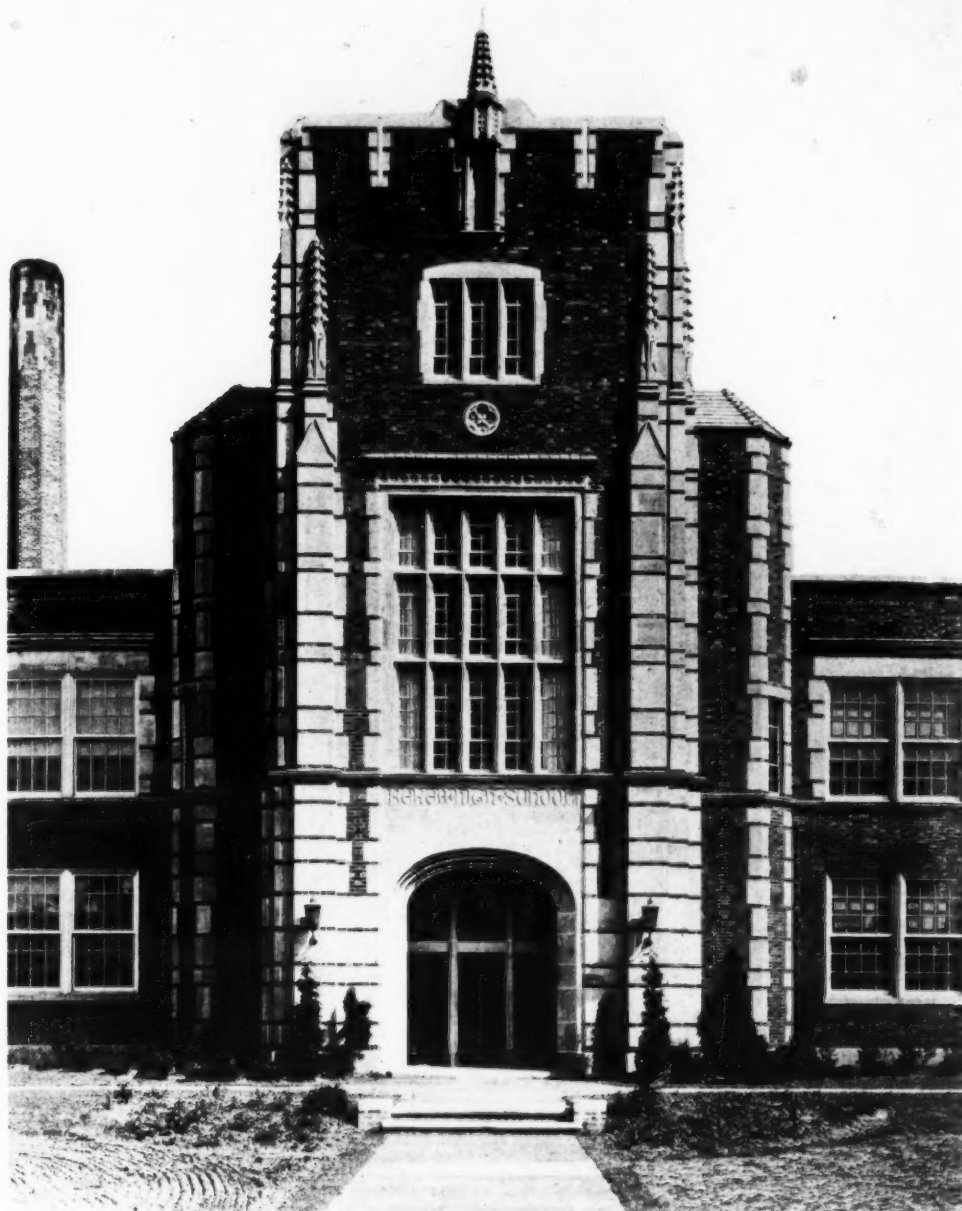
The building contains some unique features which are relatively new and unusual in school building. The corridors are spacious and well-lighted, and 650 steel lockers are arranged on the two sides. The electrical equipment comprises a complete program-clock system, a system of intercommunicating telephones, and an electric fire-alarm system. All special mechanical devices, including the lighting, heating, and ventilation were worked out under the direction of experts in the different lines. A unit heating system has been used for supplying fresh air heat to the various rooms of the building.

There is a combined auditorium-gymnasium, so arranged that it may be divided into two parts by means of folding doors. When the doors are opened, there is an unobstructed view of the auditorium or gymnasium. Complete stage and lighting facilities have been provided. The room is heated and ventilated by means of warmed air, forced through a plenum chamber into mushroom ventilators in the floor.

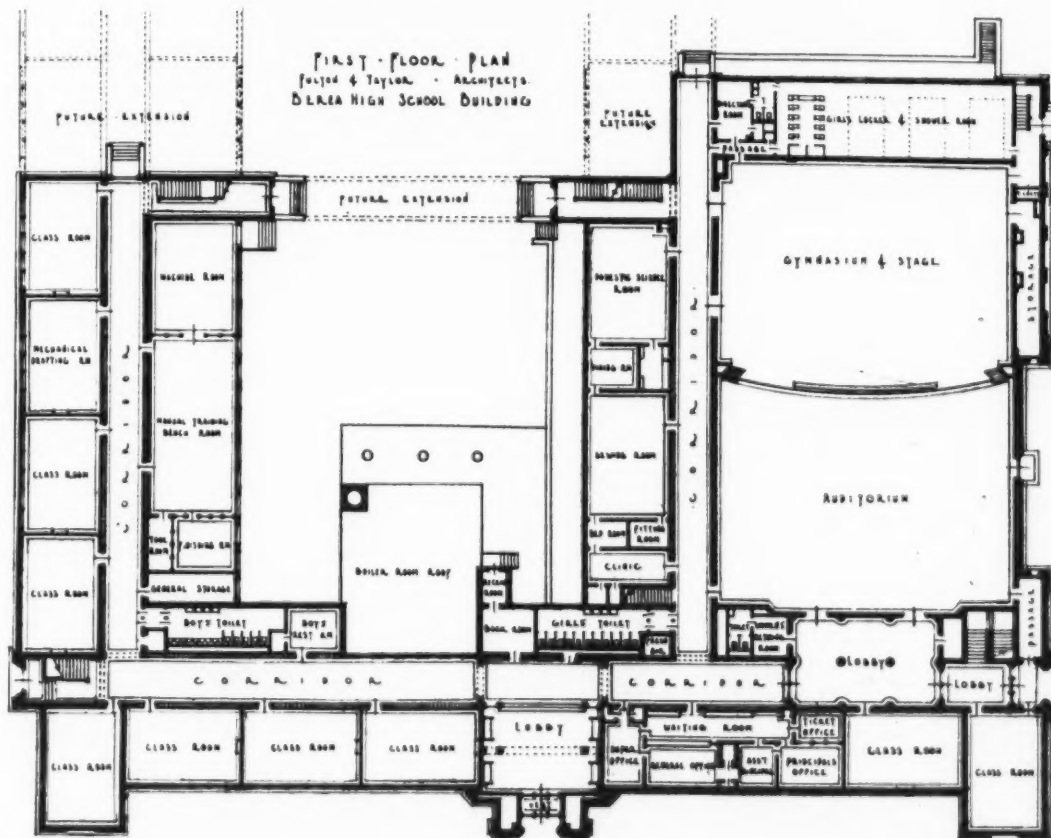
The library is located on the second floor, directly above the entrance. The room is of generous size, artistically decorated and completely equipped, and is provided with study-hall units on the right and left.

The building contains a teamroom, which is located on the side nearest to the athletic field. It is sufficiently large to accommodate fifty players at one time, in order to obviate the use of the shower and dressing rooms provided for physical-education pupils.

The girls' shower and dressing room is unique and original. It is arranged in rectangular shape, with the long dimension parallel with the outside wall of the building, which insures ample natural light. The showers are arranged along the interior wall, parallel to the windows. The lockers and dressing booths are arranged in rows, at right angles to the interior wall. On one side is an aisle leading to the showers called the "wet" aisle and on the opposite side is another from the dressing booth to the main aisle along the outside windows. There are 500 basket lockers



ENTRANCE DETAILS, BEREA HIGH SCHOOL, BEREA, OHIO
Fulton and Taylor, Architects, Cleveland, Ohio.



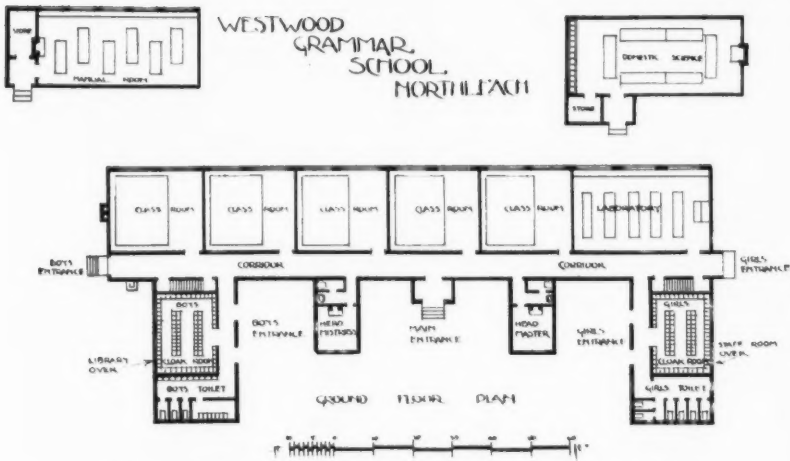
for taking care of the girls' gymnasium clothes, and 40 additional lockers have been installed for use during the physical-education periods. By changing the combination padlock from the

basket locker to the individual locker in the dressing room, it is possible for the student to have the gymnasium clothing or street clothing

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WESTWOOD GRAMMAR SCHOOL, NORTHLEACH, ENGLAND
R. F. Philips, Architect, Gloucester, England.



WESTWOOD GRAMMAR SCHOOL, NORTHLEACH, ENGLAND.
R. F. Philips, Architect, Gloucester, England.

WESTWOOD GRAMMAR SCHOOL AT NORTHLEACH, ENGLAND

This building, or group of buildings, intended for a very small community in the Cotswold town of Northleach, England, is situated seven miles from a railway station, and in a hilly district where there was little chance of obtaining construction material from near-by sources. Consequently, the school was built largely of steel frame construction with a skin of exterior

brickwork covered with waterproof stucco. The inner walls are of asbestos sheeting on timber framing. The roofs are covered with tile.

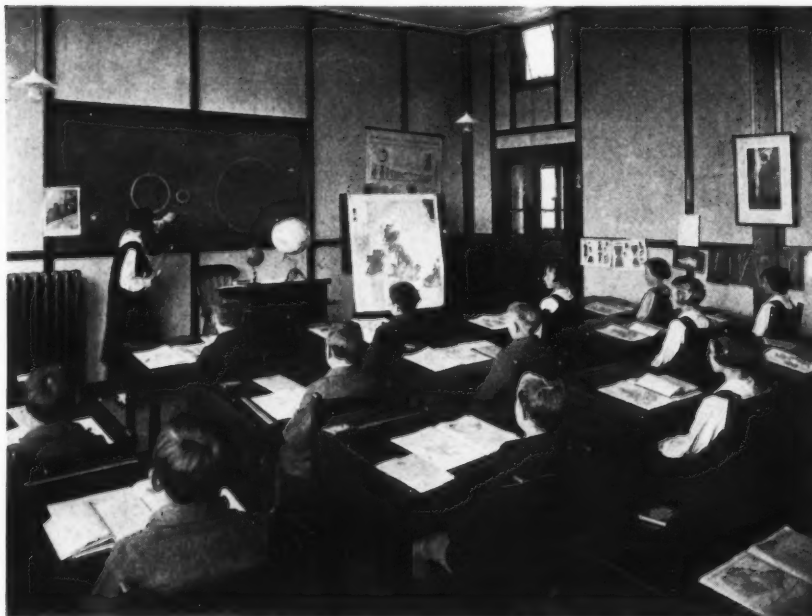
The domestic-science and the manual-training



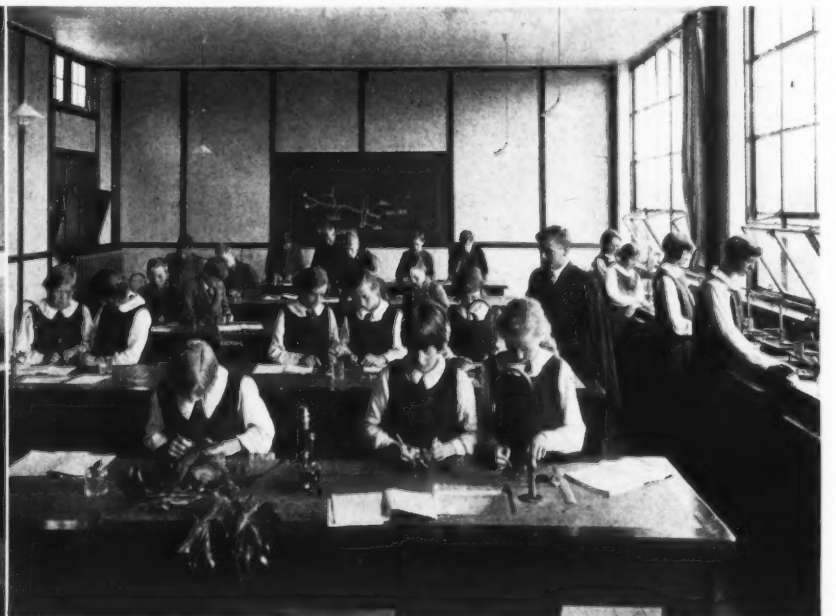
WOODWORKING SHOP, WESTWOOD GRAMMAR SCHOOL, NORTHLEACH, ENGLAND.
R. F. Philips, Architect, Gloucester, England.

rooms are also built of light steel frame with timber-frame bays and weather boarding. Internally, these rooms are finished with match

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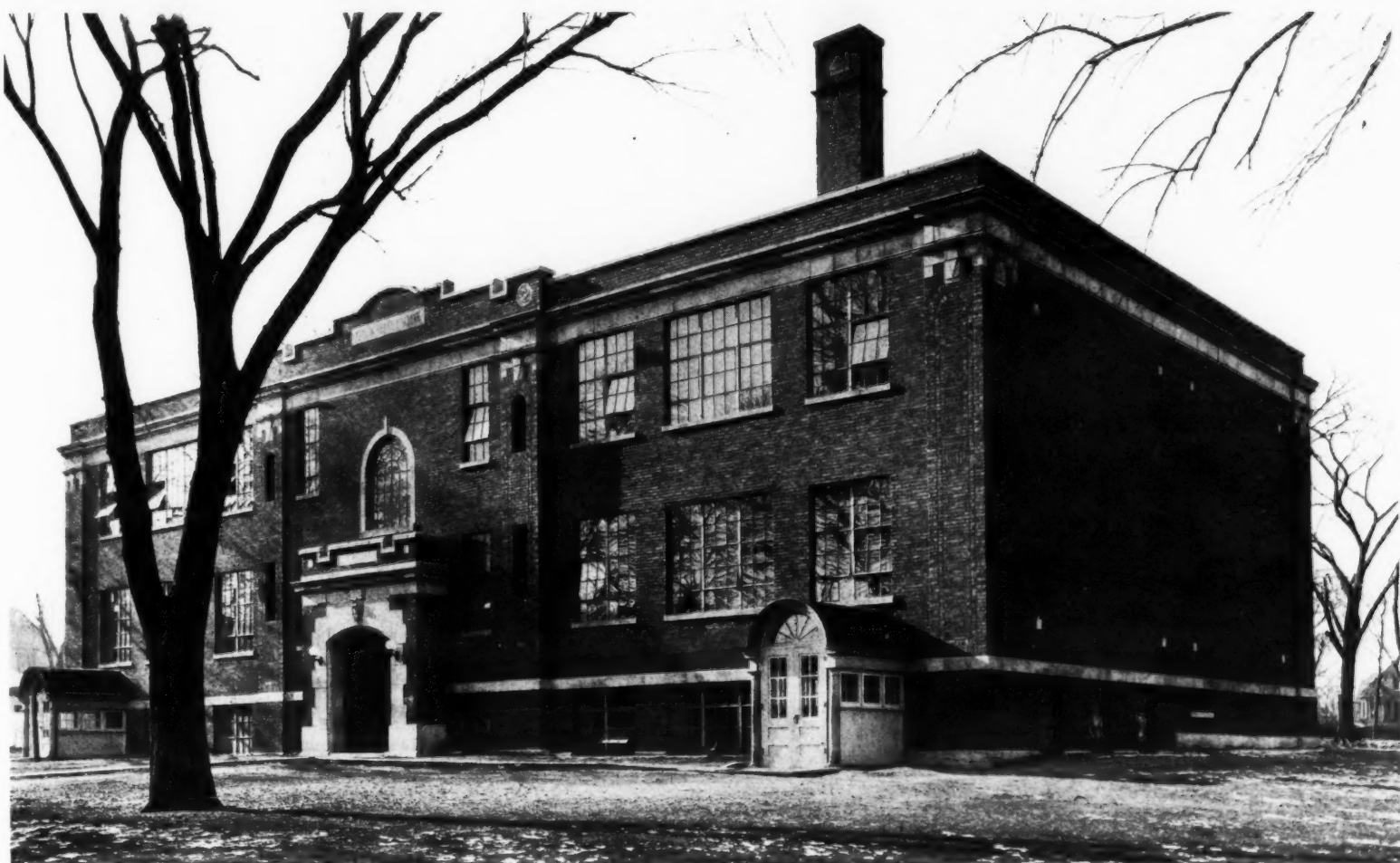


TYPICAL CLASSROOM

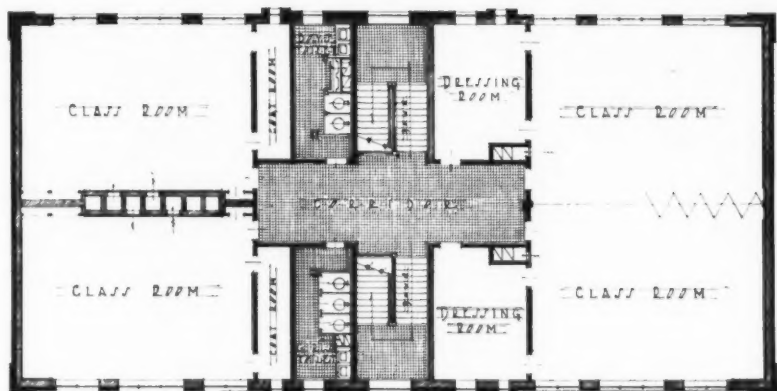


LABORATORY

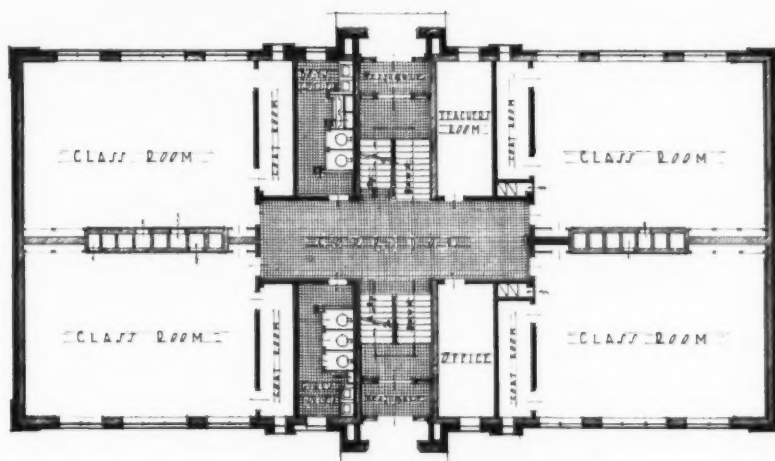
WESTWOOD GRAMMAR SCHOOL, NORTHLEACH, ENGLAND
R. F. Philips, Architect, Gloucester, England.



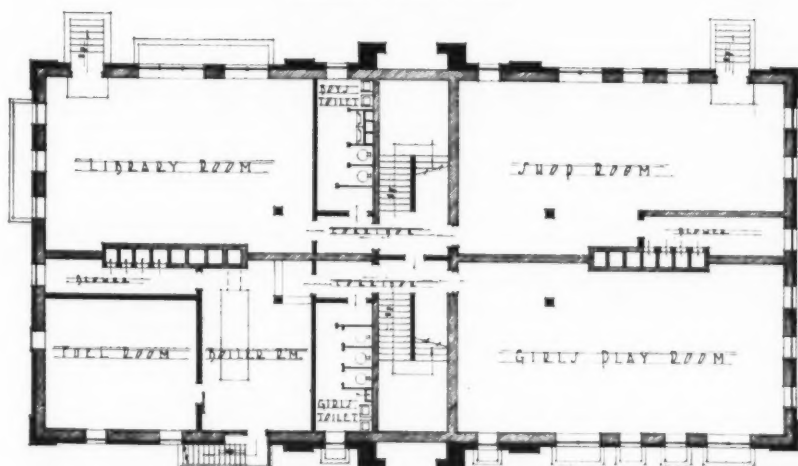
THE JOHN W. HENNEY SCHOOL, FREEPORT, ILL.
Bradley and Bradley, Architects, Rockford, Ill.



SECOND FLOOR PLAN



FIRST FLOOR PLAN



BASEMENT FLOOR PLAN

THE JOHN W. HENNEY SCHOOL, FREEPORT, ILL.



THIRD WARD SCHOOL BURNING, FREEPORT, ILL.

SALVAGING A BURNED SCHOOLHOUSE How Freeport Obtained a Modern Grade School at Minimum Cost

On Sunday, November 20, 1926, at 5 o'clock in the morning, fire was discovered in the Third Ward School building at Freeport, Ill. The fire burned so fiercely that the building was gutted, and the insurance companies made a settlement for total loss and paid in full the amount of the policies, \$27,500.

This fire provided the school board with a diffi-

cult problem, for the board had just completed the new high school and the district was bonded to the limit.

It was necessary to have a building in the part of the district that the Third Ward School served. To build a new building was out of the question. Some of the board members thought that perhaps the walls and foundation were not

damaged and that the building could be rebuilt; architects and contractors were consulted, and it was decided to have architects Bradley and Bradley of Rockford, Ill., make a study and submit plans and estimates. The findings of the architects were accepted and the contract for the rebuilding was let to Edward Rubendall of Freeport, Ill.



THIRD WARD SCHOOL BEFORE FIRE, FREEPORT, ILL.

The original building was built in 1898 and was of "ordinary construction," that is, native stone foundation, common-brick walls, brick partitions and vent stacks, and a wood-joint hip roof. The floors were of maple supported on 2 by 14-in. and 3 by 12-in. long-span white-pine floor joists.

The result of the fire showed evidence of slow burning. The fire had started in the attic, and only the second and part of the first floors had been destroyed. All walls were left standing and in good shape, too good to tear down.

After a careful survey and analysis, the decision arrived at between the school board and the architects, was to use the old walls so far as possible, but to tear out the old floor construction and rebuild of reinforced-concrete joists and slabs, to place terrazzo floors in the corridors and toilets, and maple floors on sleepers in the classrooms.

In order to have a footing for the veneer of face-brick, 8 in. of concrete was poured around the old foundation down to bed rock. This concrete served also to strengthen the old foundation.

The outside of the old walls was veneered with buff colored face-brick, laid in buff mortar with tooled joints. The trim, sills, belt courses,

cornice, coping, and entrance are of precast artificial stone. The old wood sash were replaced with steel side-wall sash and glazed with $\frac{1}{8}$ -in. polished plate glass.

The level of the first floor was raised 3 ft., which gives much better rooms in the basement. One basement room is occupied by a branch of the public library.

Except in two unfinished rooms in the basement, the building has the appearance of being entirely new.

By a similar treatment, many old school buildings could be completely modernized and made from all appearance to be new and in fact as good as new, with modern plumbing, heating, ventilating, and electric equipment.

The entire cost of rebuilding and all fees was \$61,778, or approximately 24 cents per cubic foot. The value of the total building on a basis of 30 cents per cubic foot is \$75,000.

THE SACRAMENTO JUNIOR COLLEGE BUILDING

The organization of junior colleges has, up to present time, followed so closely the organization of senior high schools that the problem of planning and constructing buildings for junior-college use has not been unlike that of the senior high school. Perhaps the exterior design of this

type of buildings has required more dignity and reserve. It certainly has not justified greater or more elaborate treatment or more expensive use of materials.

A type of junior-college building that is most interesting because of its excellent balance in plan and because of the dignified effectiveness of the exterior design is the Sacramento Junior College, erected in 1925-26 from plans prepared by Messrs. Dean and Dean, architects, of San Francisco.

The building has been recently awarded honorary mention in the common-brick manufacturers' association contest.

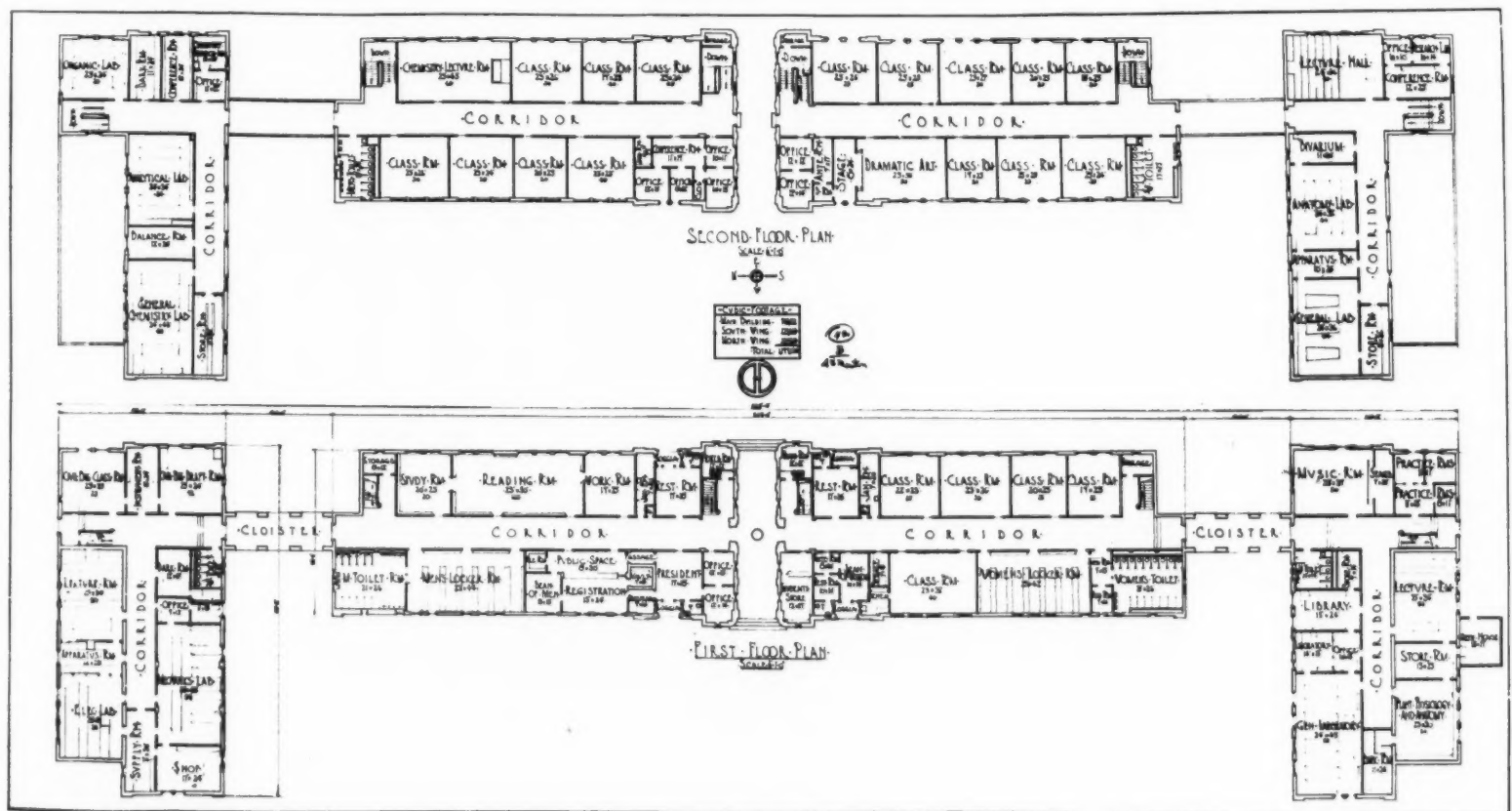
The Sacramento Junior College occupies a large site in the southern part of the city, adjacent to a public park. The site is planned for future extensions, which are to include a considerable educational group serving the entire community. The original bond issue amounted to \$550,000 and the original group of buildings, illustrated in these pages, cost \$460,000.

In reality there are four buildings, joined by means of cloisters and a central tower. The building at the extreme south serves for laboratory and shop use. The left wing of the main section contains administrative offices, a library, study rooms, classrooms, and locker room. It is the men's building.

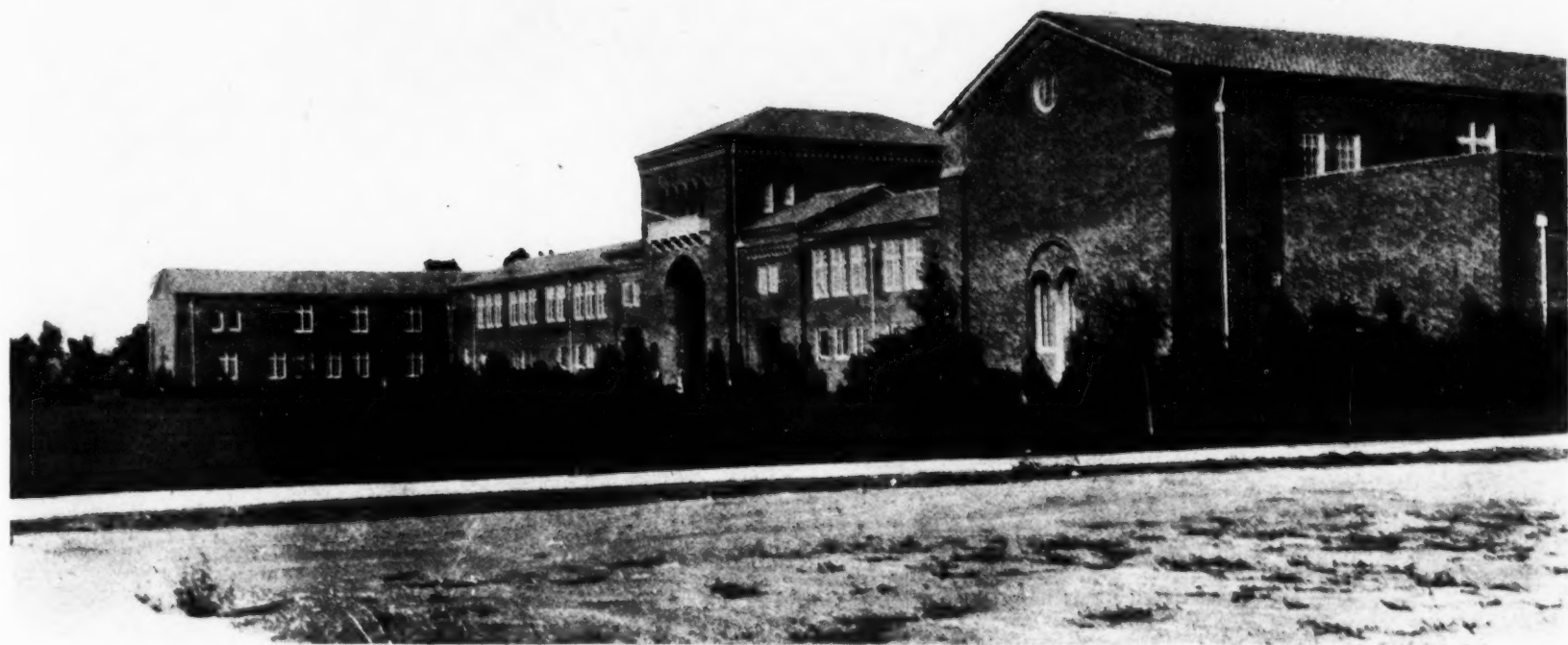
The building immediately to the right of the tower contains administrative offices, classrooms, a locker room for women, and a series of classrooms. The building at the extreme right north of the group contains laboratories and locker rooms. The gymnasium, which is not shown in the accompanying illustrations or floor plans, is in a separate building and contains also the power plant.

The design of the buildings has been simplified so far as is possible in keeping with the early Italian Renaissance upon which it is based. The buildings are constructed of concrete and brick, wood floors in the classrooms, concrete corridors and stairs, faced with common brick, set off with cast-stone trim. The large arch in the main tower is the entrance to the quadrangle, which will be formed at the rear of the building when the future group is completed.

Details of the plan, construction, and cost will be found in the following tabulation:

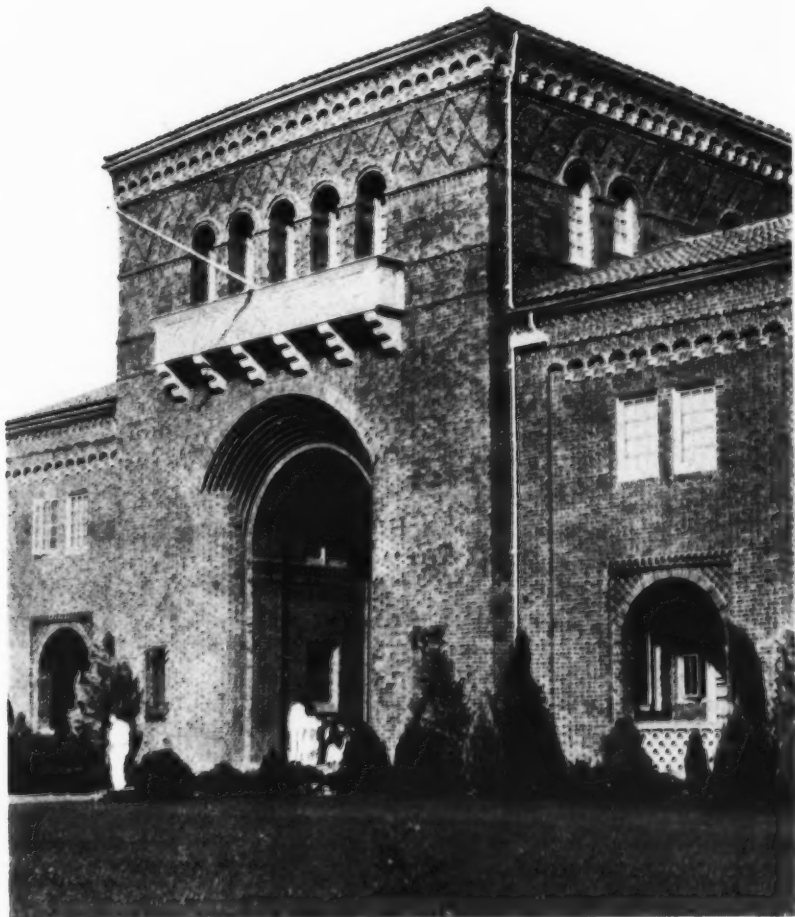
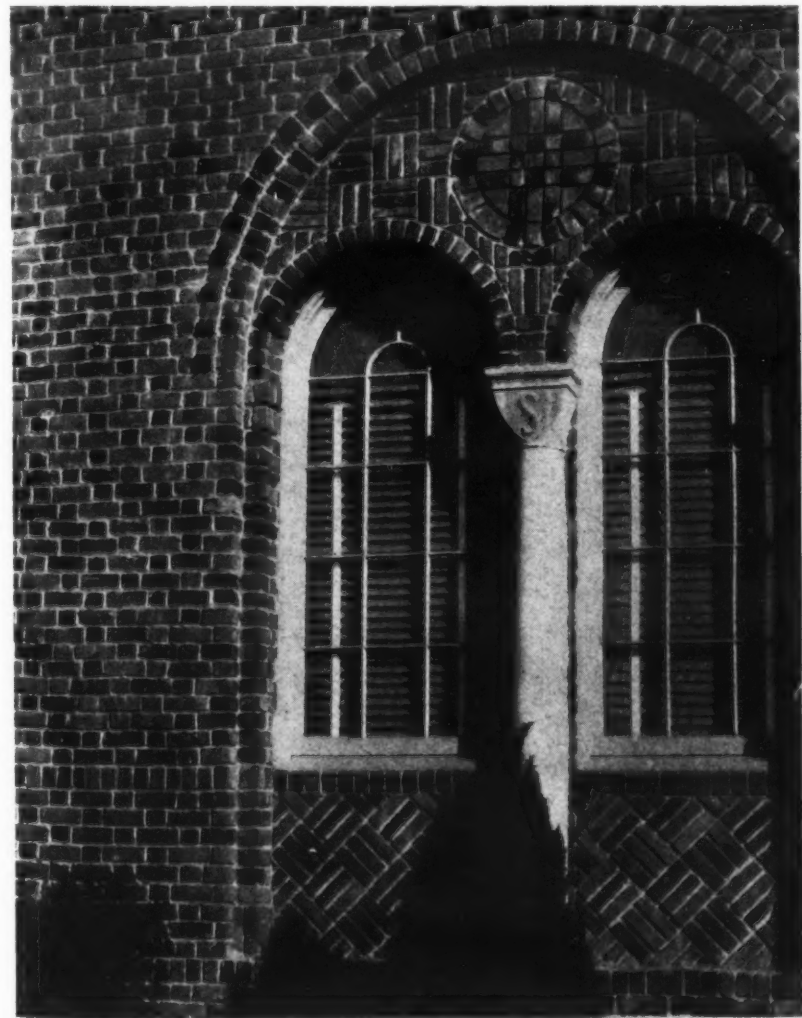


SACRAMENTO JUNIOR COLLEGE (PUBLIC), SACRAMENTO, CALIF.
Dean and Dean, Architects, Sacramento Calif.



SACRAMENTO JUNIOR COLLEGE (PUBLIC), SACRAMENTO, CALIF.
Dean and Dean, Architects, Sacramento, Calif.

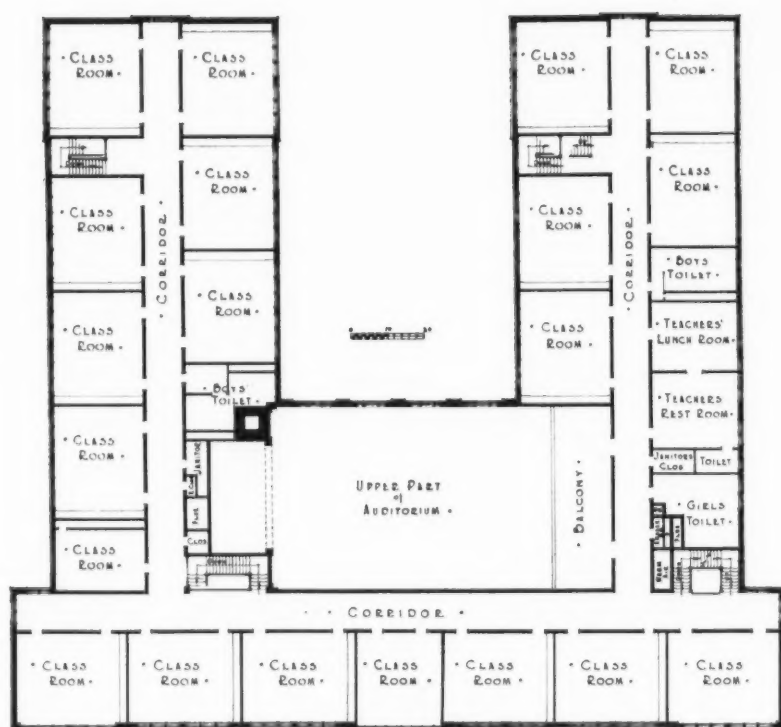
CONSTRUCTION DATA		
Date contract awarded.....	May, 25, 1925	
Date construction started.....	June, 1, 1925	
Date construction completed.....	April, 12, 1926	
Site		
Principal frontage.....	650 ft.	
Building		
Use	Junior college	
Number of rooms.....	19	
Number of laboratories.....	13	
Conservatory	1	
Library reading room.....	1	
Librarian's office	1	
Commercial-art rooms	2	
Public speaking	1	
Musie	5	
Offices	14	
Book storage	3	
Girls' restroom	1	
Teachers' restrooms	2	
Auditorium	80 by 60 ft.	
Gymnasium, boys	80 by 60 ft.	
Gymnasium, girls	47 by 85 ft.	
Design and Construction Materials		
Exterior design.....	Florentine Italian	
Exterior facing.....	Common brick and Cast-stone trim	
Construction material.....	Brick walls and wood floors	
Corridor and stair finish.....	Concrete	
Classroom finish	Plaster	
Auditorium finish	Brick	
Gymnasium finish	Brick	
Finish of toilet rooms.....	Plaster	
Mechanical Equipment		
Type of heating and ventilation.....	Steam	
Temperature control.....	Automatic	
Electrical equipment.....	Complete	
Plumbing	Complete	
Cost and Capacity		
Cost of building.....	\$450,000	
Cost per cubic foot.....	27 cents	



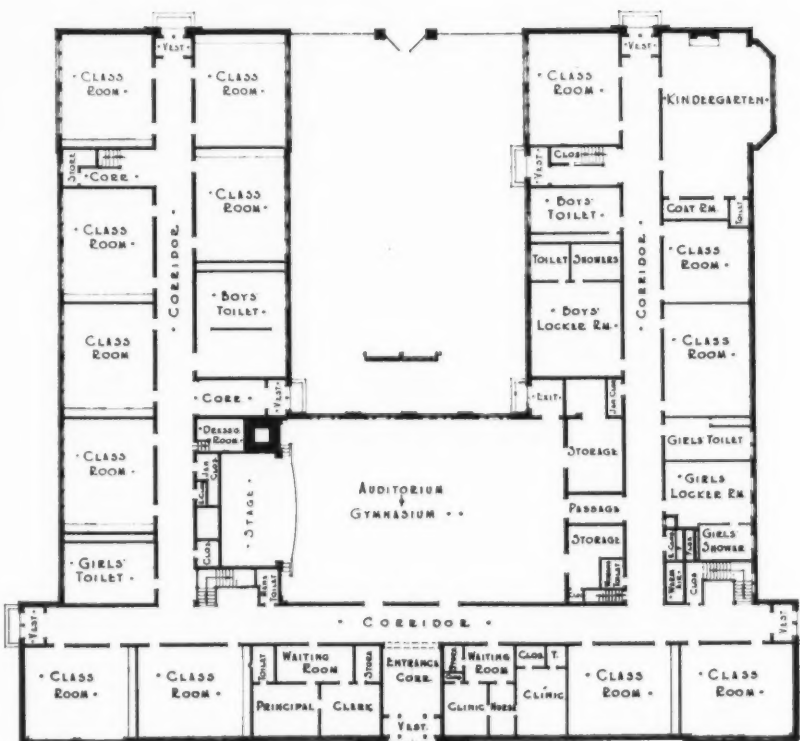
DETAIL, SACRAMENTO JUNIOR COLLEGE (PUBLIC), SACRAMENTO, CALIF.
Dean and Dean, Architects, Sacramento, Calif.



WASHINGTON IRVING SCHOOL, SYRACUSE, N. Y.
Randall and Vedder, Architects, Syracuse, N. Y.



SECOND FLOOR PLAN, WASHINGTON IRVING SCHOOL, SYRACUSE, N. Y.
Randall and Vedder, Architects, Syracuse, N. Y.



FIRST FLOOR PLAN, WASHINGTON IRVING SCHOOL, SYRACUSE, N. Y.
Randall and Vedder, Architects, Syracuse, N. Y.

THE WASHINGTON IRVING SCHOOL, SYRACUSE, N. Y.

Randall and Vedder, Architects

This grade building is an imposing structure with extremely simple lines and carefully restricted ornament. It is located on a terraced site in a modest residential section of the city.

The building was erected in 1926 at a cost of 35 cents per cubic foot. It is entirely fireproof

with exterior walls of tapestry brick trimmed with precast stone. It contains 35 classrooms, a combination gymnasium-auditorium, a kindergarten, a health clinic, and teachers' restrooms. The third floor which extends over only one wing of the building, includes a covered play porch, two classrooms, a dining room and kitchen, and toilets. This group of rooms is especially set aside for undernourished children who, because

of their physical condition, are unable to make normal progress in the schools.

Following is a tabulation of costs:

General Contract	\$367,980.00
Heating	47,647.00
Plumbing	32,450.00
Electric	14,795.00

Total \$462,872.00

Supervisory Organizations in Cities of 10,000 to 20,000 Population

Ernest O. Melby, Northwestern University

This article has for its main purpose a description of the organizations for supervision in cities of 10,000 to 20,000 population. The data were gathered during a wide investigation of the problems of supervisory organization and administration carried on during 1928. A preliminary study was made of the organizations in ten cities by interview and questionnaire combined. All cities in the United States in the size group selected were invited to cooperate in a questionnaire investigation. Completed returns were received from 171, or almost exactly half of the total number.

Superintendents were asked to supply the names and titles of all supervisory officers in their school systems with information concerning the extent to which the various officers were given time for supervision. In addition they were asked to supply data concerning the school organization, the number and enrollment of buildings, as well as grades, included in each building. The materials were so summarized as to show typical practices in the number and kind of supervisors employed, as well as combinations found in individual school systems.

Supervisory Officers Employed

Music supervisors are employed by a larger proportion of cities than any other special supervisor, viz., 83 per cent. (Table I.) Art supervisors follow, being employed by 60 per cent of the systems; while 57 per cent provide supervisors of physical education. Sectional tendencies are not large. Art and physical-education supervisors are found more commonly in the east than in the north-central states. In the case of music, the situation is reversed. The number of elementary-grade supervisors is largest in the north-central states.

Superintendents were asked to exclude special teachers in secondary schools having no supervisory relationship to the elementary schools. No account is taken here of supervisors of special subjects in the junior and senior high schools, such as industrial arts, home economics, visual education, and agriculture. A few of these were reported, but the numbers were so small as to make a special study of their work of doubtful value. Ayer reports 52 supervisors of academic subjects employed by 44 cities of 100,000 population or more in 1923.¹ This is not a large number, but it is evident that such supervisors are employed even more rarely in the systems of the size included in the present study. It is likely, also, that in most cases these supervisors are heads of departments, with varying degrees of supervisory responsibility. In elementary schools only one regular subject supervisor is reported, a combination writing-and-arithmetic supervisor. Penmanship supervisors are employed in 20 per cent of the systems, and general elementary-grade supervisors are found in 24 per cent of the cities.

It is not certain whether the number of cities employing nurses is complete. It was found that systems which sent directories, listed nurses in the directories but did not report them on the form provided. This may be attributable to the more or less common feeling that the school nurse is not a supervisor. To guard against this situation, nurses were specifically mentioned in the form. In any case, 36 per cent of the school systems reported the employment of one or more school nurses. By far the largest percentage of these cities were in the northcentral and western sections. Only one southern city reported the employment of a nurse.

The Supervisory Staff in Individual Systems

While the typical city in this group employs supervisors of art, music, and physical education, there is great variety in the personnel found in the several cities (Table II). There seems to be a tendency toward more uniformity in the eastern section than in other parts of the country. A staff made up of supervisors of art, music, and physical education is found in nearly one third of the eastern cities. With the addition of a school nurse, practically half of the eastern cities are accounted for. There seems to be a greater variation in practice in all other sections. The south shows the largest percentage of cities without special supervisors of any kind. Where only one special supervisor is employed, that one is almost always a music supervisor.

The great variety of combinations found is perhaps indicative of the uncertainty as to the most desirable types of organization. Eight superintendents question the desirability of the whole procedure of employing special supervisors. Some report that certain supervisors have been employed in the past but have been discontinued. Others hope to add supervisors of one kind or another.

TABLE II
Distribution of 171 Cities According to Personnel of Supervisory Staff Employed

Supervisory Staff Membership ¹	Geographical Section and Frequency				Total No.	Total Per Cent
	East	North Central	South	West		
M	4	2	6		12	7
MA	2	1	2		5	3
MP	3	2	1		6	4
MN	2	1			3	2
AP	1				1	0.7
MAP	19	7	1	3	30	18
MAN	4	4	1	2	11	6
MPN	2	2			4	2
MAPN	10	7	1	3	21	12
MAPH	3	6			9	5
MAPHN	5	1			6	4
MAPG		5	2		7	4
MAPGH		1			1	0.7
MAPGHN		6	1	1	8	5
MAPGN		8			8	5
MPHN		1			1	0.7
MAH		1	2	1	4	2
MAHN				1	1	0.7
MGP		1			1	0.7
MAG		2			2	1
G			2		2	1
MG			1		1	0.7
MH			1		1	0.7
P			1		1	0.7
None	6	10	8	0	24	14
Total	61	68	30	12	171	100

¹M-Music Supervisor. A-Art Supervisor. P-Physical Education Supervisor. H-Handwriting Supervisor. G-General Elementary-Grade Supervisor.

Building Principals as Supervisors

Nearly one half of the elementary-school principals in these cities are full-time teachers (Table I). Sectional differences in this connection do not seem significant. There is a smaller proportion of supervising principals in the northcentral cities, which, it was thought, might be due to the larger number of elementary-grade supervisors employed by these cities (Table IV). However, a study of individual cases causes one to doubt such a relationship. Of the 24 general elementary-grade supervisors in the northcentral section, 9 are employed by Minnesota cities. Of these 9 cities, 8 have only full-time teaching principals. When the remaining 15 cities with general elementary-grade supervisors are studied, we find that 4 have only full-time teaching principals, 3 have only part-time supervising principals, 1 only full-time supervising principals, while 7 have various combinations of these.

TABLE III
Distribution of Three Types of Elementary-School Principals According to Enrollments of Buildings for Which They Are Responsible. North-Central Section Only

Enrollment in Building	Type of Principal and Number Full-time Supervising	Part-time Supervising	Full-time Teaching
Less than 100	3		24
100-200	2	16	55
200-300	21	34	69
300-400	16	20	38
400-500	16	13	12
500-600	10	8	5
600-700	6	5	1
700-800	2	1	
800-900	7	1	
900-1000	1		
1000-1500			
No data	6	1	2
Total	87	102	206
Median	390	290	234

Influence of Small Buildings

The outstanding characteristic of the elementary-school plants in these cities is the small size of the elementary-school buildings. The median building enrollment is 300 pupils. About 7 per cent of the buildings have enrollments of less than 100, while about 18 per cent enroll from 100 to 200. The median number of buildings for each city is more than 6. Sectional differences are probably negligible.

Table III shows the relationship between the size of building, as shown by enrollment, and time given the principals for supervision. This relationship is substantiated by a study made by the elementary principals' section of the National Education Association.² According to that investigation, the median enrollment of schools with teaching principals was 287, while that for schools with nonteaching principals was 510. It should be pointed out, however, that there are considerable numbers of teaching principals, even in buildings enrolling 500 pupils or more. It would seem, therefore, that while the size of building is an important factor in the situation, administrative policy also plays a part.

In Table IV various practices in the employment of principals are shown. A city apparently may have all full-time teaching principals, all part-time teaching, all full-time supervising principals, or any combination of these types. The city may have any or all types of principals, irrespective of varying building sizes. It may have principals who teach full time in large buildings, or principals who have no teaching duties in small buildings.

Influence of the Principal's Training

It was thought that the principal's training might be a factor in the extent to which he is given time for supervision. However, part-time teaching principals have as high a median level of training as full-time supervising principals. Part-time principals also have more experience than full-time supervising principals.

²Seventh Yearbook, Department of Elementary-School Principals, p. 285.

TABLE I
Supervisors Employed by 171 School Systems in Cities Ranging in Size from 10,000 to 20,000 Distributed According to Geographic Sections

Supervisor	Number of Systems Employing				Total	
	East	North Central	South	West	No.	Per Cent
Full-time supervising principals ¹	105	87	68	38	298	
Part-time supervising principals ¹	85	102	80	34	301	
Full-time teaching principals ¹	223	207	50	16	496	
Elementary supervisors	8	12	24	35	7	23
Art supervisors	47	74	38	56	10	33
Music supervisors	50	86	58	85	22	73
Penmanship supervisors	10	16	17	25	4	13
Physical-education supervisors	43	67	40	58	6	20
Art and writing supervisors		3	4	1	3	1
Primary supervisors		6	9		1	8
Writing and arithmetic supervisors				1	3	1
School nurses	23	38	31	44	7	59
High-school principals	60	99	60	87	28	93
Junior-high-school principals	18	30	26	38	13	43
Superintendents	61	100	68	100	30	100

¹Percentages not available.

TABLE IV
Distribution of 171 Cities According to Practices in Connection with Types of Principals Employed 1928

Practice	Geographical Section and Frequency									
	East		North Central		South		West		Total	
Employs only principals giving full time to teaching	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent	No.	Per cent
Employ only principals giving part time to teaching	10	16	23	33	2	7	0	0	35	20
Employ only principals who do no teaching	8	13	14	20	8	27	1	8	31	18
Employ some non-teaching and some part-time teaching principals	8	13	8	12	9	33			25	15
Employ some full-time teaching and some non-teaching principals	6	10	5	7	3	10	3	25	17	10
Employ some part-time teaching and some full-time teaching principals	9	15	3	4	3	10	1	8	16	9
Employ some full-time some part-time and some non-teaching principals	10	16	5	7	2	7	2	17	19	11
No data	6	10	6	8	3	10	5	42	20	12
Totals	61	100	68	100	30	100	12	100	171	100

TABLE V
Distribution of 171 Cities According to Size and Number of Elementary-School Buildings

Building enrollment	Section and Number				
	East	North Central	South	West	Total
Less than 100	34	27	9	2	72
100-200	55	98	18	16	187
200-300	90	139	24	18	271
300-400	57	84	36	21	198
400-500	61	52	27	32	172
500-600	38	28	20	8	94
600-700	14	12	14	1	41
700-800	8	4	13	2	27
800-900	7	3	3		13
900-1000		2	2		4
1000-1500	5				5
Totals	369	440	166	100	1084
Medians (Enrollments)	300	271	388	366	304
Median Number of Buildings per city	6	6.7	5.5	8.3	6.4

The Typical Supervisory Organization

The typical city in this group employs an art supervisor, a music supervisor, and a physical-education supervisor. It employs a high-school principal and gives him no teaching duties. The city employs 6 elementary-school principals with varying proportions of time for teaching and supervision. The teaching load carried by these principals depends somewhat on the size of the building for which they are responsible but probably as much on the policy of the school system. The teaching load carried by principals is more or less independent of their training and experience, and seems likewise uninfluenced by the number, kind, or combinations of special supervisory officers employed.

Implications of Present Organizations

It seems evident that the whole problem of the supervisory organization best adapted to the needs of city school systems of this size is more

or less unsolved. On the one hand are systems employing as many as 6 different kinds of special supervisors, while on the other hand are those who have none. With these various combinations of specialists are groups of principals with widely varying supervisory status. Just what is the relative justification for the various special supervisors has not been determined. In terms of practice, music supervisors seem to have been thought of as being more necessary than art or physical-education supervisors. In these cities, if a school system has only one special supervisor, that one is almost invariably a music supervisor. Just what is the relative need for special supervisors of art and physical education? In terms of practice it would seem to be, roughly, the same. Just why is it more essential to have a special supervisor of physical education than one of reading, or nature study, or arithmetic?

The supervisory role played by principals is without doubt in a process of development. The size of elementary-school buildings seems to be a factor of some importance in this connection. The most desirable size of elementary-school buildings is dependent upon a number of factors, such as the distance which children can be asked to walk to school, and the needs of an effective school organization. The size of the building which justifies a full-time supervising principal has not been determined. Neither is there data concerning the relative merits of a type of organization with a general supervisor and full-time teaching principals, and a type with no such supervisor and full-time supervising principals.

Some Distinctions Between the Conventional and the Wide-Short Classrooms

Theron L. McCuen

There has been some discussion recently concerning the "wide-short" classroom. That is, the classroom in which the pupils face the broad side of the room. Dr. Louis W. Rapeer¹ in his discussion of this type of room says that it has an advantage over the conventional classroom in the matter of natural lighting and ventilation, and in proximity to the teacher. The latter advantage, proximity of the pupil to the teacher, may be measured quite definitely, but the former is open to discussion.

This consideration of the "wide-short" classroom is limited to the answering of the following questions. Does the "wide-short" classroom require a greater or lesser number of square feet per pupil than the conventional "long-narrow" classroom? This is an important question because it bears upon the cost of construction. Also, does the "wide-short" classroom actually bring the pupils closer to the teacher?

Answers to these questions were obtained in the following manner. Three standard sixth-grade classrooms were designed to provide for 30, 35, and 40 pupils respectively. Then three classrooms of the "wide-short" type were designed to provide for 30, 35, and 40 pupils respectively. The size of seats, width of aisles, distance from front desks to front wall, and the distance from the front wall to the teacher's desk remain con-

stant for both types of classrooms. The main difference between the two types is that the "wide-short" classroom provides for a greater number of rows of desks with fewer desks in each row. The classrooms, including the desks, were drawn to scale. Then by means of the architect's scale it was possible to measure the distance from the teacher's chair to the center of each pupil's seat. This data was recorded for each of the classrooms. The average distance of the pupils from the teacher for each classroom was obtained by dividing the sum of the distances from the teacher's chair to each pupil's seat by the number of seats in that classroom. These results, together with the dimensions of the classrooms, are given in the following table:

Type Room	Size	No. Pupils	No. Rows	Sq. Ft. per Pupil	Avg. Dist. from Teacher
"Wide-Short"	22' x 23'-7"	30	6	17.3	13.46 ft.
Conventional	20' x 25'-2"	30	5	16.8	14.75 ft.
"Wide-Short"	22' x 27'	35	7	16.9	14.13 ft.
Conventional	20' x 27'-6"	35	5	15.7	17.97 ft.
"Wide-Short"	22' x 30'-3"	40	8	16.6	14.68 ft.
Conventional	20' x 30'	40	5	15.0	17.06 ft.

The number of square feet per pupil in each "wide-short" room is greater than the number of square feet per pupil in the corresponding conventional room. This results from the fact that there is a much larger unoccupied space in the front of the "wide-short" room than there is in the front of the conventional room. The width of this unoccupied space is constant for both types of rooms, but the length of the space is

greater in the "wide-short" room. In both types of rooms the number of square feet per pupil in a room varies inversely to the number of pupils in that room. The number of square feet per pupil in a room diminishes as we add more seats at the rear of the room after the required increase in length has been made. The number of square feet per pupil diminishes because a smaller increment of the unoccupied space in the front of the room goes to each pupil. The unoccupied space remains constant while the number of pupils increases. The large amount of unoccupied space in the front of the "wide-short" classroom may be utilized by installing project and demonstration tables, bookcases, and display cases. The tables are much in demand because of the less sedentary methods of teaching now in use.

In regard to proximity to the teacher the table shows that the advantage is with the "wide-short" classroom. The 35-pupil room has the greater advantage. Here the difference is 3.84 feet in favor of the "wide-short" room. This room requires 1.2 square feet per pupil more than does the conventional room. The assumption is made that proximity to the teacher affects the efficiency of instruction. The question which must be settled is this: Does the greater proximity to the teacher afforded by the "wide-short" classroom increase the efficiency of the instruction to such an extent that it will justify the increased cost of construction?

There are elements other than the increased area per pupil in the "wide-short" that will tend to increase the cost of construction. Provided the windows are placed on the short side of the room, it is evident that the distance from the hallway to the windows is increased considerably. The "wide-short" room will therefore have a greater span than is found in the conventional narrow room. In order to carry the longer span the construction will have to be strengthened materially. Heavier floors and seating construction must be installed. All of these elements add to the cost of construction.

A PLAN FOR THE SUMMER CARE OF SCHOOL BUILDINGS

During the past few years, the six janitors of the public schools of Charleston, Ill., have been held responsible for the summer care and cleaning of the school buildings. Under the plan in operation, each janitor was occupied during three of the thirteen weeks, and during the remainder of the summer vacation was generally unoccupied, although he was employed and paid on a twelve-months' basis.

Upon the recommendation of Mr. W. W. Ankenbrand, superintendent of city schools, the board of education adopted a new plan of grouping the janitors during the summer vacation. Under this plan, the men were selected for their ability in certain kinds of work, since it was noted that some were better at painting than they were in handling a saw and hammer. During the five days of the week, all the janitors were employed in cleaning and general repairwork about the building, while the sixth day was given over to necessary work around the building of the particular janitor. Each janitor was given a two weeks' vacation with pay and the vacations were arranged so that one man would be absent at a time.

In beginning the work, attention was given to the cleaning of all the buildings, which required three weeks' time to complete. The buildings were thoroughly cleaned and the floors oiled. The next job was the painting and carpentry work. Under the direction of the foreman, Mr. McMillan, two of the basements were partitioned in such a manner as to make the toilet rooms private. A lunchroom was constructed in one corner of the basement, and new flooring was installed in one of the buildings. The plastering in seven rooms was removed and repaired. The

(Concluded on Page 154)

¹Louis W. Rapeer, *The Wide-Short Classroom*; in *THE AMERICAN SCHOOL BOARD JOURNAL*, Vol. 77, No. 6, p. 36 (Dec. 1928).

The New School Administration Building at Newark, N.J.

The school administration department at Newark, N. J., has recently occupied a new four-story, limestone building, costing more than one million dollars. The building which houses the executive portion of the school system of Newark, replaces part of the third and fourth floors of the local city hall and a number of inadequate offices scattered all over the city. The structure which is known as the board-of-education building, is directly in the rear of the city hall and forms the fourth unit in the city's proposed municipal group.

The exterior design of the building is inspired by the Italian Renaissance. Heavy limestone columns in the front of the second and third stories give an appearance of strength, while broad granite steps lead up to the main entrance. The doorways are flanked by solid bronze lighting standards, set off by ornamental bronze grilles and heavy glazed doors. The doorways open into a large lobby, paneled in marble, with all metal work, including the elevator cages, in bronze. A stately marble stairway leads to the second floor.

The entire first floor of the building is occupied by the department of medical inspection. Each of the various units under Dr. G. J. Holmes, has its own office and clinic; there is a waiting room and an attractive gymnasium for corrective work, with dressing rooms at each end.

The third floor is wholly occupied by the superintendent's department. The superintendent has a well-furnished office fronting on the main street and looking toward the city hall and Broad St. The room is furnished with attractive walnut furniture and a fine rug covers the floor. Admittance to the private office is reached through a private entrance, or through the waiting room and the office of the secretary. The secretary's office which is furnished also in walnut, provides space for the office records which are in charge of a special record clerk.

Beyond the secretary's office is a large room for the general office staff, and beyond that the individual offices of the assistant superintendents. Then comes the office of the editor of the School Bulletin, two rooms devoted to the art

department, and the offices of the general supervisor and the supervisor of the music department.

On the opposite side of the hall is a large room for the domestic-science department and the high-school dean, with a suite of offices for the platoon school supervisor and for other supervisors of departments.

On this floor are located the quarters of the department of visual instruction. Light and well-furnished offices are provided for the assistant superintendent in charge of his work, and his staff, while directly adjoining is a small film-projection room. The room seats 50 persons and is equipped with a projection machine and projecting screen. Films and slides in regular use are kept in the room, while the general stock is kept in a special film-storage vault in the basement.

Space is also provided for storage closets for the superintendent's office, a restroom for the secretaries and clerks, and a meeting room for the board of examiners. Beyond this is the department of reference and research, and beyond that, the board-of-education library.

On the fourth floor are located the business offices of the board of education and its meeting rooms. In the end nearest the city hall are the

offices of the business manager. Behind them is the drafting room, and across the hall is the office of the superintendent of supplies, and his staff.

The board-of-education room, which is in the front of the fourth floor, provides for a well-appointed meeting place. All the furnishings of the room have been designed in keeping with the Early English style. At one end of the room is a large fireplace. The furniture includes walnut table and chairs, and the finish is in the same wood. The windows are of stained glass. Along the walls chairs and benches are provided for the use of the public, with a desk and a chair at one side for the secretaries. A partition separating this room from the secretary's office may be pushed back at any time there is a demand for more seating space to accommodate a larger audience.

Across the hall from the board room is another large room intended as a private office for the president of the board, but large enough to be used for special conferences. The remainder of the space on the fourth floor is occupied by the secretary to the board and his assistants. In the hall which connects with the secretary's office, is a door leading to the vault where the school records are kept.

In the basement are located two large fireproof vaults, one the film-storage vault, and the other for the superintendent's department. The entire basement has been fitted with steel cabinets and shelving for the storage of supplies.

The Personnel of Boards of Education of Public High Schools in Nebraska

From an analysis of the survey reports of public-school systems it is evident that surveyors have paid little attention to the controlling factor in the progress of public-school administration, namely, the personnel of the boards of education. The purpose of an investigation conducted during the year 1927-28 by Mr. Chas. A. Werner, was to determine who the men and women are that compose the boards which control public secondary education in Nebraska. (The boards of the two largest cities were omitted from the study). From what social classes do they come?

What training do they bring to the task of determining the educational policies to be adopted by the schools? Have they the willingness and capacity to understand and adopt modern tested policies under proper executive leadership? What intellectual and moral equipment do they possess for bearing the responsibilities which the state has placed upon them? How much time do they devote to the duties which devolve upon them as members of boards of education? Are their vocational and political alignments such as to prevent them from being considered representative of the general interests of their communities? The answers to the questions provide an interesting cross section of a most important phase of the Nebraska school situation.

The investigation was made by means of a five-page checking-list questionnaire, which was sent out to 500 superintendents in the state. Two hundred fifty-six, or 51.1 per cent, were returned, and 246 were included in the data on which the study is based. Ten were excluded because of late return and inadequate information.

In tabulating the data for interpretation, the boards of education were divided into five classes based on the classification of the public high schools made by the school laws of Nebraska. The schools ranged in enrollment from 1 to 902. They were divided into five classes, and the number of board members as prescribed by law for each class. For example, Classes I and IV have six board members each. Classes III and V have three board members each and Class II has five board members.

The data considered warrant the following conclusions regarding the personnel of the boards of education for 246 public high schools in Nebraska.

1. The number of members on the boards ranges from three to six. The boards of the smallest schools have the smallest number of members, three, while the boards of the intermediate-size and the largest schools have the same number of members, six.



BOARD OF EDUCATION BUILDING, NEWARK, N. J.

2. School-board members in Nebraska are elected at large on nonpartisan tickets, at annual school elections, for a term of three years, except the county superintendent of schools and the county treasurer, who are members of the county board by virtue of their positions. After the annual election in 1928 the county superintendent and county treasurer will be elected for a term of four years.

3. The mean tenure of office of board members in Nebraska is 5.98 years. The range is from 1 to 33 years.

4. The average number of meetings annually of 224 school boards is 12. The mean number of meetings annually of the school boards of Class I is 13.8; of Class II, 10.6; of Class III, 10.5; of Class IV, 13; and of Class V, 10. The mean length of meetings is 2.29 hours, with a range of from 0.25 to 4 hours. Members of boards of education of 220 schools of all classes devote, on the average, 45 hours each to school-board duties annually.

5. Fifty-two and four-tenths per cent of 1176 school-board members of the public high schools in Nebraska serve without compensation. The range in percentage is from 43.1 per cent of schools of Class V to 70.2 per cent of schools of Class I.

6. The mean age of men on boards of education is 47.8 years. The mean age for women is 44.4 years. The range of ages for men is from 28 to 77 years, and the range for women is from 30 to 65 years. Women compose 6.1 per cent of 1230 board members.

7. Of 1227 board members, 98.1 per cent are married. Seventy-two and five-tenths per cent of 1224 board members have at least one child in the public schools. Ninety-two and nine-tenths per cent of 1212 board members own taxable real estate or personal property in the district in which they hold office.

8. Of 1206 board members of 236 schools, 15.4 per cent have less than an eighth-grade education; 21.1 per cent have completed the eighth grade; 31.8 per cent have attended high school; 19.6 per cent have attended college; 2.3 per cent have done graduate work.

9. Only 18.8 per cent of 1230 board members are reported as having taught school.

10. Of 1230 board members, 96.1 per cent were reported as either being affiliated with some church or having a church preference.

11. On the average each board member in Nebraska is affiliated with 2.3 clubs and fraternal organizations. Thirty-seven different clubs and fraternal organizations are represented by 1192 board members, with a total of 2737 memberships. Forty-two and two-tenths per cent of 1230 board members have held, in the recent past or are holding at present, some political office.

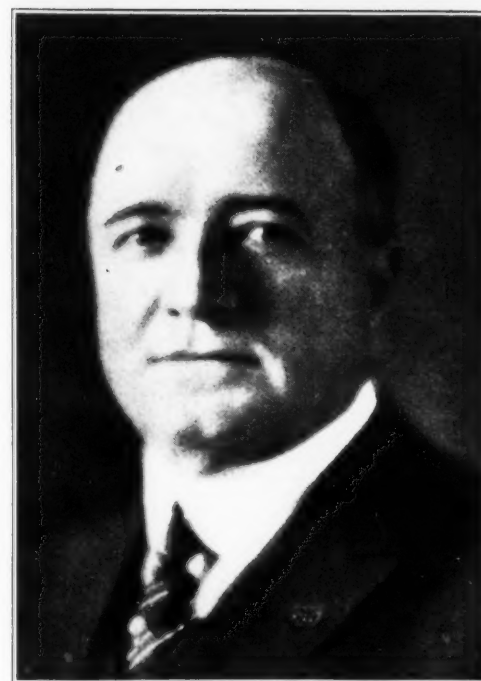
12. Twenty-seven and five-tenths per cent, or approximately one out of four, of 1217 board members are engaged as proprietors. Nine and two-tenths per cent are in professional service, 7.3 per cent in managerial service, 3.9 per cent in commercial service, 1.2 per cent in clerical service, 27.8 per cent in agricultural pursuits, 11.5 per cent in artisan-proprietor service, 0.8 per cent in building and related trades, 0.2 per cent in printing and related trades, 1.6 per cent in transportation service, 0.2 per cent in political service, and 5.6 per cent in miscellaneous occupations including housewives and retired citizens. Forty-nine and three-tenths per cent of all board members are farmers, merchants, bankers, and physicians.

13. Of 1178 board members, 1138, or 96.6 per cent, are American-born, and 40, or 3.4 per cent, are foreign-born. Sixty-four and three-tenths per cent of all board members are born of American parents.

14. Of 1001 board members of all schools, 33.7 per cent prefer the Democratic party, 61.3 per cent the Republican party, 1.6 per cent the Prohibition party, and 0.2 per cent the Socialist party. Three and two-tenths per cent have no party preference.

15. Superintendents rate 42.1 per cent of 1013 board members of all schools as conservative, and 57.9 per cent as progressive in opinion. Of 1038 board members, 39.2 per cent are rated as excellent in open-mindedness, 31.3 per cent as good, 17.3 per cent as fair, and 12.2 per cent as poor. Of 1075 board members, superintendents consider 91.6 per cent as successful in their present occupations. Superintendents consider the members of 76.6 per cent of 197 boards as representative of the best citizens of the community.

16. Only 38.6 per cent of the boards of education of the public high schools in Nebraska subscribe to educational magazines. The *SCHOOL BOARD JOURNAL* is subscribed to more often than any other educational magazine.



MR. W. W. TRITT
Assistant Superintendent of the Los Angeles Public Schools,
Los Angeles, Calif.

The promotion of Mr. William W. Tritt from a principalship of one of the city high schools to the position of assistant superintendent of the Los Angeles school system is a fitting recognition of Mr. Tritt's 33 years of service to the school system.

Mr. Tritt has been a resident of Los Angeles since 1888 and was educated in the Los Angeles schools. He was graduated from the Los Angeles Normal School in 1893. After two years of teaching in Los Angeles county schools, he entered the city school system in 1895, where he has remained ever since. Following a period of service as principal in the grade schools, Mr. Tritt was elected to an assistant superintendency in 1901, but in 1903 he left to become principal of one of the grammar schools. In 1923 he was appointed principal of the Belmont High School.

In addition to carrying his schoolwork, Mr. Tritt was graduated from the University of Southern California College of Law, and has received the degree of A.B. from the same institution.

Mr. Tritt enters upon his work with unusual scholarship and attainments and with a broad viewpoint on educational problems.

12. Less than 7 per cent of the schools analyze the floor oil, while 21 per cent of the schools analyze the soap.

The preceding statements show in brief the present status of old schoolroom floors and how they are treated. But the comments from over a third of the interested parties reveal some satisfaction, some dissatisfaction, and the present tendencies. It is interesting to note that there is decided concern among many schoolmen in regard to the present methods of caring for old floors. Here are several extracts from the comments that were received:

Comments:

1. We are doing away with oiling, substituting wax.
2. Clear, high-grade oil, and the best sweeping compound keep the floors serviceable.
3. New school buildings will have terrazzo floors in corridors, and rubber stone in classrooms.
4. We refinish maple floors every three years with a wood preservative (on-a-pine).
5. Old floors are scrubbed with a strong solution of S. H. cleaner; discoloration is removed, then the wood is oiled sparingly.
6. In some places we have placed new floors over the old.
7. Schoolroom floors are never scrubbed, we use 13 cent oil.
8. After January 1, all floors (except one) will be new concrete covered with linoleum. Wax, carbo-var will be used on the linoleum.
9. We use a power machine for cleaning, a great saving.
10. We use wax on maple floors, and paint on cement. We use a kerosene brush; are trying amberlite on cooking room floors.
11. New floors are covered with linoleum and are waxed.
12. Satisfactory caring for floors is one of our most troublesome problems.
13. We have quit applying oil; we scrub every two weeks.
14. A high-grade oil is better than cheap oil, less dark, lasts longer.
15. Janitors are inclined to use too much oil. Semdac is used, find it very satisfactory.

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The Rehabilitation and Care of Schoolhouse Floors

Charles Bruner, Superintendent of Schools, Kewanee, Ill.

There is no part of an old school building which looks worse, or gets more severe treatment than the floors. For the most part, the old floors are dark and oily, or have the appearance of having no life or strength in the wood. But, can anyone wonder at the condition, when he counts up the number of pairs of feet that pass back and forth in a schoolroom during just one week? In an average class of 35 pupils there will pass in and out of the room, in a single week, 1400 pairs of shoes, some dirty, others hobnailed, and others both hobnailed and dirty.

In order to combat the dust evil the general practice of oiling the floors has been quite generally instituted. The problem of dusty floors does not seem to be so apparent in new buildings, because, as a rule, better floors are laid in the first place, and better provisions are made for their upkeep.

In October, 1928, a letter of inquiry was sent to 100 superintendents in Illinois for the purpose of learning the practice of school authorities in maintaining floors in old school buildings. A total of 92 replies, giving the information asked, was received. The following summary thus provides a dependable cross-section of the situation:

1. More old buildings have hardwood floors than pine floors.

2. There is a greater percentage of pine floors which have grown dark than maple floors, but a greater number of maple floors (because they predominate) have grown dark through treatment and use.

3. Seventy-eight per cent of the pine floors are treated with floor oil. Only 64 per cent of the maple floors are treated with floor oil.

4. Most floors are treated twice a year.

5. Seventy-three per cent of the oiled floors become too dark.

6. Eighty-six per cent of the schools use a sweeping compound, and nearly all of these use a commercial product.

7. Practically all floors are scrubbed; most of the scrubbing is done twice a year.

8. Twelve school systems clean their floors with oil, from one to three times a year. Three of these expressed satisfaction.

9. Twenty-six scrubbing machines are in use, but most schools still use the hand mop.

10. Nineteen per cent of the 92 schools have resurfaced the old wood floors. These floors have been treated with linseed oil, floor oil, varnish, wax, amberlyte, or wood-gum dressing.

11. Sweeping brushes are the principal tools used for sweeping purposes. Fifteen schools use vacuum cleaners, while a few others use brooms and dust mops.

The Department of Superintendence at Cleveland

A Successful Winter Meeting of the N. E. A. Groups

It is difficult to characterize in one or more brief phrases a huge educational gathering like the Cleveland meeting of the Department of Superintendence. The multiplicity and the variety of the sessions, the number and the outstanding reputation of the speakers, and the importance and interest of the topics were such that every school executive, be he the youngest grade principal, or an old city superintendent could find rich funds of information and inspiration on the problems nearest to his heart. The articulation of the various parts of the school system, the possibilities and needs of preschool education, and the financing of schools were the three topics that seemed to stand out among all the rest as causing the most concern to the educators of the country. Character formation seemed to appeal to the superintendents as the one great unsolved problem. It was noticeable, however, that practically no attention was paid to such important developments as adult education or vocational education.

The attendance of the week reached the 15,000 mark and the combined registration of members of the Department and of the N. E. A. exceeded 8,000. The meeting halls and exhibit space of the Cleveland Auditorium, as well as the local arrangements for hotel, railroad, and other accommodations were the best which the Department has ever enjoyed. President Boynton proved to be vigorous and happy as a presiding officer. There were more expressions of satisfaction and less grumbling than is usually the case at a meeting of schoolmen who are accustomed, in their home towns, to be treated with the respect that comes to the head of a school system.

The Program and the Meetings

The address of welcome by Mrs. Clara T. Brewer, member of the Cleveland board of education, represented a broad understanding of the program of public education and served excellently to introduce the presidential address. There was much practical wisdom in Dr. Boynton's paper, particularly in the sections which called attention to the growing complexity of the problems which the schools are asked to solve. "The criticisms of the cost of education," he said, "came largely from the small but powerful and active class, made up in part of those who believe that education above the line of illiteracy is the exclusive right of a few select souls, who claim it for their own by a sort of divine right prestige by heredity and wealth, forgetting that in this matter of prestige they are the product of that democracy which they now desire to strangle; a class made up in part of these and in part also of those gold-greedy go-getters, who have been willing to rob childhood of its birthright and to coin it into coupons, in order that with unconscious irony, they may build monuments to themselves on college campuses." The complaint against the high cost of public education did "not come from the working man living in a small rented house, struggling to support a large family on a small income, struggling against the approaching day when his older children must give up school and join the ranks of the wage earners. . . . Is it the less numerous middle-class worker, owning his modest home, whose children he can look forward with a fair degree of assurance to attending the high school for a season?"

Mr. Boynton was not so convincing when he defended the efficiency of the American schools, as compared with those of Europe, nor when he drew a picture of the moral and social conditions which the school is expected to combat.

As scholarly an analysis of school-building programs as has been heard by the Department of Superintendence was presented by Supt. Joseph M. Gwinn of San Francisco. Speaking of conditions in the average community of the country, Mr. Gwinn certainly spoke the truth when he said: "Our first concern for a future school-building program is that there be a program. A survey of school buildings of the past shows that in practically every instance, school buildings have not been built according to a program. Like Topsy, they just grew, and with many of the evil consequences of the lack of plan and forethought. School buildings should be provided, planned, and erected according to a definitely formulated guiding policy drawn in ac-



FRANK CODY
Superintendent of Schools,
Detroit, Mich.

President-Elect of the Department of Superintendence.

cordance with the best educational theory and practice, and adapted to the educational program of the day, and yet able to adjust to future educational and population needs.

"Economy in future school-building programs is to be secured through providing buildings, grounds, and equipment adapted to the needs of a modern program of education. Old and antiquated school buildings must be replaced by buildings of a form and type that are suited to an up-to-date type of education. A factory that turns out goods for which there is no market is an expensive factory."

Four forces which in Mr. Gwinn's opinion have an influence on future school-building programs are: (1) economic pressure which may force a curtailment of the improvements to expand education upward and downward; (2) social and psychological forces which urge the expansion of school programs; (3) educational research and philosophy which indicate changes which will upset our present opinions concerning buildings; (4) discoveries and inventions which are producing tremendous changes that are modifying, and will modify, education. "A large concern for future school-building programs is a proper method of financing. School buildings should be paid for in a manner to make the tax burden as light as possible. Bonding, pay-as-you-go, and paying in advance (depreciation), are the three ways of financing school buildings. The method best to use will depend upon many conditions. Large school districts with many school buildings and great tax values should probably use the pay-as-you-go or pay-in-advance plan. Small school districts with but a single or a few buildings, and with small tax values, may have to resort to bonding. There has doubtless been too little use of the depreciation plan and of the pay-as-you-go plan, and too great use of bonding. Economy can be served by a greater use in the future of the depreciation plan and a corresponding decrease in the issuance of bonds."

Prof. George D. Strayer of New York City, in discussing "The Financing of Schools," repeated in large part the arguments which he has made during the past two years concerning school finances. His leading themes continue to be the necessity for more money to be used in equalizing opportunities as between wealthier and poorer communities. "A nation," he said, "which is able to save fifteen per cent of its income need not be anxious concerning the expenditure of 2.68 per cent of its income for education." The most convincing portions of the address were those which were limited to the practical consideration of improved fiscal administration within the states, larger administrative units, stronger state supervision,

the prevention of waste, the reform in state taxing systems, and the introduction of new and more equitable sources of funds.

The Monday Sessions

A wag among the Cleveland newspaper men called attention on Tuesday morning to the fact that the superintendent who had attended the sessions on Monday and had really followed the meetings must have listened to 194 addresses. He expressed very mildly the multiplicity of meetings and the diversity of interests represented by the programs of the entire week. The Department certainly has come to a point where it is necessary to eliminate some of the many organizations which are holding on to its coat tails. On Monday afternoon there were eight group meetings for the discussion of administrative problems, each largely limiting themselves to the financing of education. On the whole, the papers were the equal of those at the general sessions. In fact the writer in shuttling between three of the group meetings was impressed by the fact that most of the speakers were quite as vigorous and scholarly than some of the addresses at the subsequent general meetings. Dr. Paul Mort in speaking on "Rural Education and Finance," Supt. A. L. Threlkeld in reviewing "Taxation," Prof. P. C. Packer in suggesting "Financial Economics in Administration," and Mr. L. D. Upson of Detroit in urging "The Pay-as-you-go Plan" presented outstanding papers.

On Monday evening the entire department enjoyed a colorful demonstration of drills, dances, and other forms of physical education as carried out in the Cleveland schools.

The Tuesday Meetings

Supt. Herbert S. Weet of Rochester, on Tuesday morning, made a strong plea for "Better Articulation of the School System." He showed that while there has been much progress since the early days when the elementary schools, the academies, and the colleges were entirely separate institutions, conducted without relation to one another, there are still widely different ideas concerning the organization, the curriculum practice, the teacher training, the promotional methods within each of the types. The Commission on Articulation has adopted as a basic principle the idea of standardization, not for the purpose of making all schools identical in scope and content, but rather for the purpose of producing unity. We cannot escape standardization in education any more than we can in industry. The standardization in the mechanical field has shown many elements that are acceptable and directly helpful in education. The work of the Commission on Articulation will be valuable, if it does nothing more than provide a review of the whole task of education in America.

No speaker was listened to more attentively during the week than Dr. John Dewey, who declared that failure is the chief source of waste in American education. "The elimination of waste, due to breaks and duplications in the joining together of various portions of the school system, depends upon consideration of the process of growth, physical, psychological, and moral, of the pupils. Different powers ripen at different rates, and the development of each capacity as it manifests itself should result in achievement, which then become tools in the maturing of other powers."

"Waste in education results from failure to observe these principles. One example of educational waste is the failure to adapt the teaching of early school years to the normal activities and experiences of children at that age, due to the external imposition of the three R's; others are the uniform four-abreast treatment of school subjects, instead of alternate periods of concentration and remission; the confining of teachers to single grades; the absence of a sufficient variety of teachers in the early grades; and the tendency to justify existing divisions of the school into separate units."

"The chief source of waste is failure at all stages from the elementary school through the college, to utilize the experiences of children and youth gained out of school. Isolation of school from life is the chief cause of harmful isolations within the school. The problem could be best approached as one of continuous differentiation rather than as one of external articulation."

Pres. E. C. Elliott of Purdue University, declared in his paper on "The Problem of Articulation from the Standpoint of the College," that a completely unified and harmoniously related educational system is the only reliable guarantee of a united people for the United States. "Our generation," said Dr. Elliott, "has witnessed the raising of the democratic ideal of education by the enlargement of college and professional school opportunities for an ever-increasing number of the youth. The inevitable conclusion of the present trend is that the higher training afforded by the colleges, universities, and technical schools will come to be regarded as the expected preparation of all those properly fitted for the responsibilities of complete American citizenship. In other words, the higher educational system of today is to be amalgamated into the common-school system of tomorrow."

Mr. Cameron Beck, who concluded the morning session, would have been less disappointing, perhaps, if so much had not been expected of him.

The sessions on Tuesday afternoon continued the morning discussion on "Articulation" from the practical standpoint. Various groups took up the new types of organization, economy of time through reorganization of units, college-entrance requirements, six-year high schools, etc. Again it was evident that some of the best papers of the week were presented to limited groups.

The Fourth General Session

Staff officers of large and medium-size school systems who are free from the disturbances that interfere with the scientific study of school problems by superintendents have gained not only in number, but in effectiveness, in recent years. Much of the scientific progress of city school systems has come from men engaged especially in research as heads of efficiency or research departments. The general session on Tuesday evening, which took up the problem of "The Importance of Research for School Administration" gave evidence of the growth of this phase of schoolwork. Supt. M. R. Keyworth of Hamtramck, Mich., Mr. W. W. Theisen of Milwaukee (whose paper appears on another page of this issue), Assistant Commissioner A. C. Morrison of New York State, and Dr. M. R. Trabue of North Carolina, talked on a program that was the equal of any of the entire week.

The Wednesday Sessions

Supt. E. C. Hartwell of Buffalo, N. Y., who opened the discussion of the topic, "A Better Selected and Better Trained Teaching Staff" is in a peculiarly strategic position to frankly speak his mind concerning the type of young women which he expects teacher-training institutions to turn out. Under Mr. Hartwell's guidance, Buffalo has for many years conducted special training courses for teaching novices, and no young woman who comes into the Buffalo school system can say that she has not received every possible help for making her an efficient instructor. Mr. Hartwell argued that teacher-training institutions should have superior administration and a superior faculty in order that they might be certain to certify teachers with superior personal ability, scholarship, and character. Normal schools, he said, should train teachers for the elementary schools as an ideal of service and should not seek to expand into the field of the general college.

Supt. Charles S. Meek of Toledo, Ohio, urged in a mildly ironical vein that the college should provide students who expect to enter teaching with genuine teaching equipment, with a complete knowledge of children in the adolescent period, with an understanding of the principles of high-school organization and instruction, and with an appreciation of the improvements which have caused a revolution in secondary education.

Dr. Julian Butterworth of Cornell University, argued that the normal school which prepares teachers for village and rural schools must take into account not only the common duties of the teacher in city and rural schools, but must provide an understanding of the rural, social, economic, and religious organization. He made a strong plea for equal service, better salaries, and better ability on the part of teachers in rural schools.

Dr. Franklin P. Graves, who closed the meeting with one of his scholarly and incisive discussions, took the viewpoint of the teacher and made a strong argument for better understanding and more sympathetic help from the superintendent of schools. Schools are dodging their responsibility when they refuse to accept new teachers who are

without experience, except that which they receive in the normal school. All teachers are deserving of encouragement from the superintendent by professional rather than economic inducements. The training schools cannot be expected to provide better teachers, unless they are given an opportunity to understand the schools.

The entire administrative groups, on Wednesday afternoon, devoted themselves to the problems of selecting and training teachers. It was interesting to compare the viewpoint of superintendents in the very large cities where the chief school executive is concerned with policies and general methods only, and the problems of the small towns where the superintendent must personally conduct all the interviews and directly assume the responsibility for placing each teacher.

In the group of cities above 200,000 population, Supt. C. W. Washburne of Winnetka, Ill., made a plea for awakening in the teacher a desire to use her abilities. This is best possible by decentralized supervision and by providing each teacher with an opportunity to make use of her special skills and aptitudes, not only in the methods which are emphasized in the classroom, but in working out one or more scientific research problems. The need in schools is for unity of plan, carried out with great diversity so that each school and each individual child is served according to his needs and ability.

Pres. Fred Hunter of the University of Denver, made a strong plea for training teachers in service when he said that teachers confronted with the actual problems of teaching have a better opportunity to learn and to grow in service than they have in a teacher-training school. The salary

schedule is the poorest method of advancing teachers, or of improving their service.

Character Education

The three addresses on Thursday morning on the subject of character education were, generally speaking, the most thought-provoking of the week and represented the serious attention which is being given to the most baffling problem now confronting American schools. Dean W. F. Russell of Teachers College, pointed out that character education is an outstanding purpose in all education. He expressed his own personal concern in the problem when he said that if he can be assured that his own boys will be God-fearing men and good Americans, he will care nothing about their I. Q. Dr. Russell described in brief the scientific studies which are being made at Teachers College in relation to self-control, deceit, and persistence as important elements of character. He argued that there must be information of right and wrong, habituation of right conduct by daily practice, and pride in right conduct. He stopped just short of indicating a complete plan which might serve completely his purpose, but he perhaps reflected what was in the back of his head, when he quoted from Tom Brown's School Days, in which the old squire desired to make his boy a God-fearing man, a gentleman, and a good Englishman. Dr. W. C. Bagley, in a most thoughtful, forceful address, stopped short of indicating how a complete system of character training might be made a fact. His searching analysis of American social conditions pointed out that we are in a difficult situation. If homicide is considered an index of moral conditions, we must confess that the United States is in a

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The Hick Superintendent at Cleveland

DEAR EDITOR:

Just a line to tell you about the Cleveland meeting in case you were not there.

I did not expect to get to go this year, but at the last meeting of the board, Dr. Jensen said that he had just heard that the superintendent from Jonesville was going, and that if that district could afford to send their man we couldn't afford to keep a man who didn't go. That settled it, so I went home, got out my old blue serge, sponged it off a bit and found it still didn't look half bad. I only had to get a new tie and three new shirts special for the trip.

Leaving home Saturday afternoon, I drove the new Ford down to the junction, caught the flyer for Chicago, and found quite a number of other schoolmen on the train. About noontime Sunday we pulled into Cleveland, and I went straight to the Hotel Cleveland where I expected to meet a man I got acquainted with in Boston. His name

was Phil Harmon and I think he is a book agent or a supply man. He told me in a letter awhile ago that he was going to put up at the Cleveland and that he thought he would have an extra room and would like to have me occupy it. At that time I didn't plan to take in the Convention so I told him not to hold it for me, and when I found I was going, it was too late to let him know.

Trying to find anyone in that hotel at that hour was like trying to find a needle in a strawstack, so I gave it up and went up to the desk and asked the clerk for a room. He asked me if I had a reservation and I told him about Mr. Harmon and he said he didn't know anything about that. So then I asked him if he had a room I could have and he replied that they were all taken. However, after quite a lot of talking, he finally said he had a room that I could have until Tuesday morning. He gave the bell boy a key and we stepped into an elevator and talk about getting up in the world, we shot straight up for eleven floors in less than ten seconds. The clerk said the room would be \$3 a day.

It was a good room alright, even though I was afraid it was going to be up under the roof. It had three kinds of water—hot, cold, and colder. Funny thing about the hot water, the minute you turned it on, it was boiling hot, but you had to let the ice water run a little to make it good and cold.

The room door was bulged in on the inside and out on the outside as if it were double and I soon noticed it was a sort of a closet. So I left the door open and watched until I saw a bell boy go by and asked him what the idea was. He told me it was so traveling salesmen could put their suits and soiled linen and shoes in it and in the morning they would find the suits pressed, the linen washed and ironed and the shoes shined. Quite an idea, I call it. Right outside my door was a place to mail letters without leaving the hotel.

I liked the room so well that I thought I'd see if I couldn't persuade the clerk to let me keep it all through the convention, so when I went down to the lobby I watched my chance and when he wasn't busy, I went up and asked him how were chances for me keeping my room. He replied that it was engaged for Tuesday, so I said, "I'll tell you what I'll do. You let me keep that room and I'll pay you \$4 a day for it." But he didn't seem to like that and said that a dollar a day was nothing to him. He was different from me if that were true.

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THE SCHOOL BELL WHICH THE SUPERINTENDENTS HEARD

—Cleveland Plaindealer.

Helping to Solve the Clerical Problem in High Schools

Edward A. Fitzpatrick, Ph.D.

In the first article there was considered the psychological problem of the attitudes and feelings of high-school teachers toward clerical work, and these, as given in the language of the teachers themselves, reflected an adverse force of considerable strength on teacher morale. The second article presented certain facts regarding the amount of clerical work required, variation of it in different schools, the clerical organization and personnel, and the conditions under which clerical work was done. In the present, final article, there is presented in summary form, a series of constructive suggestions for dealing with the problems revealed in the first two articles.

Some General Principles

There emerged from this study of the actual situation, a series of principles or general rules that may be helpful to school systems of all size as general guides to practice, if not binding, principles. These general rules or principles are:

1. Whenever tabulations are for purely administrative purposes and do not have diagnosis values for the individual teacher, they should be made by clerks.

2. Whenever it is possible to have clerks do work of a clerical (or administrative) nature in preference to teachers, it should be done in the interest of economy and efficiency, e. g., book-rooms, inventory, checking incoming supplies.

3. So far as possible, teachers should be relieved of clerical work and even of the supervision of clerical work.

4. A basis for allotting clerical assistance to high schools should include:

- a) The register of schools
- b) Annexes
- c) Variety of courses
- d) Double sessions
- e) The character of the school organization
- f) Reports required
- g) The character of the forms used
- h) Character of school population
- i) Size of individual departments

5. Clerical assistance allotted to the school should be assigned within the school by the principal of the school and not determined by central authority.

6. High-priced supervisory and administrative educational officers should not be spending their time or energy in clerical work which clerical workers with one quarter of their salary can do ordinarily more accurately and more quickly.

7. The type of clerical workers should be determined by the kind of service to be rendered, not as in the school system under study, which had only one type of clerk, a high-class secretarial worker.

8. The clerical staff should carry the clerical load of the school.

9. Clerks should perform clerical services, not personal services.

10. Student assistance should not be exploited.

11. Student assistance should be organized.

Need for Continuing Self-Study

Beside these general principles of action, there should go along continuously a study and investigation of the problems of the particular school. Perhaps nothing was more clear in this whole investigation than the widely different character of different high schools in the same city school system. Even the same kind of high schools, like general academic high schools, or cosmopolitan high schools, were widely different in internal organization and organization procedure. It is, therefore, suggested as closely related to principles, the necessity for continuing study which is involved in the following two recommendations:

1. The whole question of clerical service is intimately tied up with the organization of the individual schools and their administrative procedure. No intelligent base can be developed un-

til there is detailed study of the widely varying organization of all the high schools in the city.

2. Each school (and variation is exceedingly great) should make a study of its own organization and clerical needs with the primary purpose of reducing clerical work originating within the school to the lowest possible extent consistent with adequate information regarding school service and school needs, efficient administration, and a developing school policy.

The Clerical Work for the Teacher

The heart of the clerical problem from the standpoint of an educational system is in its relation to the teacher. We saw in the first article how significant a psychological problem it is. The following recommendations are made on this subject.

I. There is certain clerical work that is an incident of the teaching service and this should be performed by the teacher.

1. For the recitation teacher this is the
 - a) Current record of attendance
 - b) Current record of class marks
 - c) Making original record or entry of final marks (for permanent record cards and reports)
 - d) Making tabulations that have diagnoses value of self-revelation.
2. For the official class or section teachers
 - a) Record of attendance
 - b) Correspondence with parents as to discipline or failure of individual student including report cards.

II. Teachers should be informed definitely what reports or data are required of them, just what they are for, and, as far as possible or whenever possible, they should get some evidence of their use. As one teacher expressed it, she should get some "comeback."

III. Definite provision should be made by the educational officers of the school (not the clerks) to "orientate" new teachers into the clerical requirements of the school, when the data is most conveniently collected, and the form of reports.

Clerical Assistance by Students

Two kinds of supplementary clerical assistance are provided in this system.

The first kind is students. There was considerable differences of opinion by teachers as to the value of student assistance. But frequently some of the adverse opinion was due to the fact that the student assistance was not definitely organized. The mimeograph squads and floor patrols in some of the schools were certainly very effective. The main points under this heading have been covered in the general principles that student assistance should not be exploited, and it should be organized. Attention is also called to the two following points:

1. It should be helpful to the student as adjunct to or application of work, in course, or be

felt as a real service to the school, department or to fellow student.

2. The limitation suggested by the administrative assistants, to the principals, seem too narrow in scope and does not consider the whole problem, judging by high spots of student clerical assistance: "We believe that relief to the general office through the use of pupils should be limited to messenger service. In our experience efforts to use students for additional relief have proved that the arrangement is not fair to the pupil, the necessary supervision of these students is greater than the help secured, and relief is uncertain because of program changes, examination schedules, etc."

Clerical Assistance by Teachers in Training

The second kind of supplementary clerical assistance was given by teachers in training. This was really an orientation course in teacher training, and gave the administrative authorities of the school a chance to size up new teachers. The system need not concern us except to point out that as these teachers were not needed for classroom work at particular times, they were given clerical work, which gave them some insight into the administrative machinery of the school, and the use that teachers' reports were put to. General administrative ruling had been made in this school system, regarding these teachers in training, which is as follows:

1. The administrative ruling is "You are aware that the board of education established the position of teacher-in-training primarily for the purpose of supplementing the education of prospective teachers by means of training and instruction in the problems of class management and other duties of a teacher in a high school. As an offset for such training it was understood that a teacher-in-training would perform service as a class teacher or in some other duties profitable to the school which might reduce the expense of instruction and administration of the school. When facilities in a school are afforded for training prospective teachers, the employment of such teachers-in-training should have the effect of lessening the number of appointments of assistant teachers."

Importance of Clerical Worker in Administration

Finally, we come to the group that bears the actual burden of the clerical work of the school; namely, the clerical workers. One must never forget that the quality of the educational administration of the school will depend to a considerable degree on the effectiveness of the clerical worker. The freedom of the principal and his administrative assistants to do the thinking and planning of the school will be helped or hindered by the efficiency of the clerical workers, and likewise, the attitude of the teachers toward their work will be dependent both on the attitude of the clerical workers and the part of the clerical burden that may be distributed to them. It was, therefore, felt necessary that recommendations for the clerical workers should be more detailed than the others. We have already included in the second article the recommendations for adequate light and air and space and facilities in the place where the clerical workers do their work. In addition, the following recommendations are presented:

The clerical force in the school should be organized with some kind of administrative head, and some kind of definite analysis of duties. For that purpose the following recommendations were made for the school system under study:

1. The position of chief clerk designated by the principal annually shall be created with a salary of \$150 above the present schedule. It

(Continued on Page 154)





THE AMERICAN School Board Journal

WM. GEO. BRUCE } EDITORS
WM. C. BRUCE }

EDITORIAL

WHERE SHALL BEGINNING TEACHERS BEGIN TO TEACH?

In view of the fact that there are city-school systems whose rules provide that no teacher shall be employed unless he or she has had teaching experience elsewhere, the question may properly be asked: Where shall beginning teachers begin to teach?

Where such rules are laid down it follows, too, that high standards are exacted and maintained. A teacher usually prefers the larger to the smaller center of population, not only because the compensation may be more acceptable in one than the other, but because the larger usually affords more diversion and social freedom. The teacher with a year's teaching experience elsewhere can readily be found.

But if every school system adopted the rule that no one would be employed unless the applicant had a year's record of successful teaching behind her, it would soon become difficult to find anyone eligible for appointment. The beginning teacher must have a chance to begin teaching somewhere.

The school system that can lay down exacting conditions and enforce them is, no doubt, in an advantageous position. It can always maintain a cream list of teachers. But is it fair to the other school system that is obliged to accept the green recruit? Would it not be more fair for every school system to accept its quota or proportion of new recruits?

With the constant migration of teachers from the rural to the urban districts, from the unattractive to the attractive positions, from a meager to a remunerative compensation, the problem adjusts itself. The beginner begins with the teaching job in the remote rural districts and then looks toward the village in the way of a promotion. By changing positions she gains experience, and if that be true, the pupil's interests ought not to be impaired.

The surplus crop of teachers turned out of the normal schools and colleges in recent years has enabled school authorities to be more rigid in exacting high professional standards. The beginner finds it harder with each year to secure a desirable position in a medium or large-size city with the result that a better class of teachers finds its way into the rural schools.

THE GREATEST ACHIEVEMENT IN SCHOOL ADMINISTRATION

It is only by making comparison between the conceptions of school administration in this country of a quarter of a century ago and those that prevail today that we secure an adequate estimate of the progress that has really been made.

The cumbersome board of education of two and three decades ago, with its numerous committees and busy bodies, dominated the professional labors of a school system with an iron hand. The appointment of a teacher came within the prerogatives of a board member, the adoption of textbooks was not the concern of

those that taught from them, the formulation of a course of study was a mere matter of expediency.

The scope and function of the superintendent was in a hazy state, and the relations between board and schoolmaster remained undefined, except that he who had the voice and vote dominated the situation. School scandals were common. Textbook adoptions became a scramble between individuals and cliques. Teacher appointments and promotions were within the control of those who controlled the majority vote.

In the evolution that followed the relations between the several factors that make for school government, gradually became clarified. Sensible board members soon realized that there was a wide difference between legislative judgment and professional experience and that the educational expert rather than the layman must determine upon the professional labors of a school system.

Whatever may be said of the type of citizenship that found its way into board-of-education circles, and the struggles that followed between the progressives and conservatives, good judgment prevailed in the end. Reforms were recognized and inaugurated. Undue prerogatives were gradually relinquished. The professional factors step by step came into their own.

The contention that if the board of education conferred large powers upon the superintendent there remained nothing for the former to do was also dispelled. The well-ordered school board of a modern day finds that it has many important problems in policies dealing with the purely financial and administrative phases which are far more important than meddling with purely professional affairs.

The changes which have led from large to small school boards, from ward or district representation to representation at large, from short to long terms, have in the main brought about an acceptable condition. The relations between boards of education and the superintendent are today on a sounder basis than they have ever been before. The board has become the legislative, judicial, and administrative body that delegates authority to those best fitted to exert it.

It is this conception of school administration that forms the real achievement of the past quarter of a century.

THE CULTURAL SIDE OF A SCHOOL STRUCTURE

The modern schoolhouse embodies many things not thought of three decades ago. Works of art have always found their way into the corridors and classrooms of school buildings, and with increasing frequency and volume in more recent years the expressions of cultural ideals have also been extended to the structure itself and to its interior embellishments and outdoor adornment.

The average assembly hall is not only tasteful in design, but frequently bears the touches of refinement. The drop curtain on the stage may prove to be a work of art, the seating suggest something of the coziness of the home, and the windows breathe perfection in their setting and proportions, and the walls are held in harmonious tints and shades.

The exterior of the schoolhouse has also experienced the touch of the artistic. Beautiful effects have been achieved in the planting of shrubs and flowers about the school premises. The landscape gardener has demonstrated his skill, and many unsightly conditions have given way to the pleasing and acceptable. The pupil has been taught the beauties of nature and how even the school grounds may be made more attractive.

In saying all this it may, however, be added that while many of the modern school structures express grace of exterior design and interior

decorative effects, it does not follow that the school public of America as a whole has fully accepted cultural adornment in its highest and best forms of expression. The cold and uninviting find their way into some of the structures that make pretense to modernism. The surroundings of the schoolhouse, in many instances, are left drab and bare.

The tendency in the direction of the cultural, as far as interior decoration and exterior adornment are concerned, is on the increase. Each year sees some striking innovation along these lines. Sometimes the private citizen comes forward with a gem in art, or a board-of-education member awakens to the cause of the artistic.

Among the public buildings of the average community there is none better adapted to house works of art and stimulate the cultural side of life than the modern high school. City halls, courthouses, and libraries may be within its grasp, but art galleries are not. There must be some building in which the cultural aspirations may find expression.

It requires no argument to contend that the concrete expressions of art exemplified in schoolhouses have a beneficial influence upon the community. These expressions find response in stimulating more pleasing home surroundings and in elevating the human mind to an appreciation of the finer privileges of an earthly existence.

WHEN ARE STAR CHAMBER SCHOOL- BOARD SESSIONS PERMISSIBLE?

The charge so frequently seen in the public prints that boards of education are transacting public business behind closed doors invariably carries with it an air of suspicion. A newspaper reporter has been excluded from a committee or board meeting and records that fact in a spirit of resentment. The public is asked to believe that all is not well, and that the school authorities are withholding something which the public has a right to know.

A closer inquiry usually reveals the fact that the board of education was entirely justified on certain matters of public import in meeting behind closed doors. The enterprising newspaper man is not inclined, however, to tell his readers even though he may know, that the board is entirely justified in its course.

The subject is an old one, and has been referred to repeatedly in these columns. Unquestionably school authorities have in the past, conducted meetings and conferences behind closed doors that might more advantageously have been held in the open. But this does not argue that executive sessions are not expedient or wise when certain questions are under consideration.

It seems to us that in the past, greater damage has been done by unwise publicity than by unwarranted secrecy. A sensible board of education knows full well just what deliberations must be engaged in, in order to avoid publicity likely to do harm.

It is a fixed fact that questions involving the morals of teachers and pupils cannot safely be heralded from the housetops. Some grievous experiences here are on record. The board member who in a spirit of broadness of mind has thrown the doors wide open when questions of delicate nature had to be adjusted, has lived to regret his action. Publicity aggravates the scandal, if any, while a quiet adjustment will accomplish the desired results without blasting reputations or causing unnecessary embarrassments.

The selection of school sites can usually be discussed with greater advantage in executive session than in an open meeting. Let it be known that the school authorities contemplate the purchase of this or that site and prices will go up. In a western city the school board had an offer to purchase a school site. Someone demanded open board meetings at which the site question was being discussed. The result was that the board

and to pay \$54,000 for a site that had originally been offered at \$26,000.

In recent years large city boards of education have held executive sessions and have boldly defended them. It has also come about that newspaper editors, in certain cities, familiar with the necessity of executive sessions under certain conditions, have openly defended them. Boards in determining upon open or closed meetings should be guided entirely by the nature of the business to be transacted.

MAJORITY AND MINORITY FACTORS IN SCHOOL ADMINISTRATION

Notwithstanding the great progress made during the past quarter of a century in the matter of school administration, there are still boards of education in various sections of the United States which are afflicted with the evil of partisanship. Members of boards of education are nominated through the machinery of political parties and assume their suits bearing a party label.

Thus, it has come about recently in several communities that one or the other of the political parties claimed that it won the day, holds the majority vote, and consequently is entitled to the committee plums. There are still boards of education that apply the same partisanship in organizing which obtains with a state legislature or a city council. To the victor belong the spoils. The majority controls the organization.

A recent newspaper report from Scranton, Pa., reads: "All seven Republican directors of the board of education voted against the suggestion of Director James W. Flanagan that the rules be so changed as to make it mandatory for the president to name at least one member of the minority on each committee."

At Bridgeport, Conn., a school-board member rises to ask: "What sort of politics is it when the Republican leader insists on the appointment of a man as principal argument in whose behalf is that he is a member of a Republican club?"

A rather unique situation is presented when the minority feels that it must demand representation on committees controlled by the majority. There are oddly enough boards of education where the members split into majority and minority factions regardless of party affiliation. The minority is either given but a meager representation on the committee make-up or else is counted out altogether. In such cases party politics seems to have little to do with the matter.

The divisions are not conducive toward obtaining the best results. The majority may hold itself responsible for the successful administration of the schools, but it cannot be said that in arriving at conclusions the best thought of an entire membership has been secured. Besides, an organized majority rule is bound to be one-sided and undemocratic, and the minority is bound to place itself in an antagonistic attitude.

Some of the troubles which these boards of education have encountered have been largely due to the tendency of a majority group to overreach itself merely to demonstrate to the minority that the latter has nothing to say.

It only follows that where this practice obtains it ought to be stamped out. Majority and minority groups should be unknown and every question, project or departure, considered by the board of education, should be subjected to the judgment and voice of the whole body and not any fraction thereof.

DISTINCTION THROUGH EDUCATION

Periodically some one jumps up to show the number of college graduates who have gained distinction and the number of common school graduates who have failed to do so. The figures, of course, are convincingly in favor of higher training. The number of college men who become famous is comparatively vastly

larger than the number of those who rise to fame with a common school education.

These published comparisons, no doubt, have their value in that they prove an incentive towards higher learning. The nation needs leaders in every field of human endeavor, and if the college trained provide a large percentage of useful men let us encourage more college training.

We are not in accord, however, with that class of champions of higher learning who employ comparative illustrations in order to argue that every young man must strive to win high distinction. Nor, do we sympathize with the thought that a college training must be sought as the only step towards the road of fame, or that a common school education consigns the youth to oblivion.

There can be no argument over the fact that the college trained man has a better chance to win distinction and fame in life than the man who has had nothing but a grammar school education, but this does not argue that all must have a college training, and that all can or ought to win distinction and fame. Not all boys have the inclination or capacity for higher learning, and it may be fortunate for society that they have not.

The greater volume of the world's manual labor is performed by those who have never seen the inside of college, and perhaps they perform their work very much better because of that fact. This is no argument against higher learning, but it is an argument against the contention that all men must possess it. It would indeed be a sorry world if all men were trained for leadership and for generalship. Only an

army of competent followers can make leadership effective.

WASTING TIME

School boards frequently waste the time of their executive officers in requiring bids for small purchases of school supplies and equipment. Similarly, they waste the time and money of business firms whom they require to bid on small articles.

Imagine an ordinary business man requesting three or four firms to submit written bids on the purchase of a dozen pencil sharpeners, or a gross of crayons, or a hundred feet of pine lumber. Still, such requests are made constantly by school boards. It is not unusual for a publisher to receive a request for a bid on three copies of a book which retails at fifty cents.

School boards may well adopt a plan for allowing minimum purchases, which may be made without a formal tender and without competitive bids. School boards in smaller cities may well fix the minimum for bidding at \$50 or \$100, but in communities of any size, it should be the rule to permit purchases for less than \$200 without the expense or the formality of bids.

It may be objected that school boards cannot be sure of economical prices without bids. This statement implies that either the business people are not fair and ask exorbitant prices, or the executive school authorities are not competent or honest enough to secure reasonable prices. The remedy here lies within the school organization itself, for any business manager or purchasing man who cannot learn the market prices and values of ordinary school equipment and supplies and buy with efficient economy, deserves to be replaced. Competitive bids will not help matters much—an efficient man is needed.



THE WISE AND THE FOOLISH SCHOOLMEN

Index of School-Bond Prices¹

Harold F. Clark, Teachers College, Columbia University, New York, N. Y.

School-bond interest rates increased very slightly in February. The net interest rate of all school bonds sold in February was 4.52 per cent. The net interest rate on all school bonds sold in January was 4.41 per cent. As the figures show, the net interest rate on school bonds was .09 of one per cent higher in February than in January.

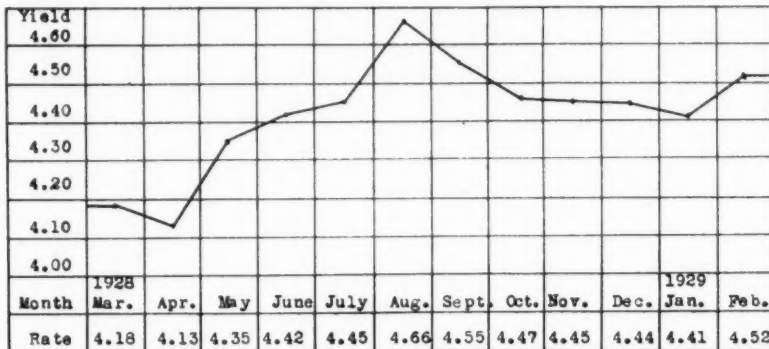


TABLE I. AVERAGE YIELD OF ALL SCHOOL BONDS SOLD DURING THE MONTH

This increase in bond interest rates doubtless represents a very real change in bond market conditions. At several times in the past sixty days the Federal-Government bonds have sold at new high interest rates. It has been very common

TABLE II
Amounts and Yields of Bond Issues²

	December, 1928
1. School bonds sold during the month of February	\$ 19,267,412
2. All municipal securities sold during the year (to date)	152,326,000
3. All school bonds outstanding (estimated)	3,252,000,000
4. Average yield of all school bonds outstanding (estimated)	4.63%
5. Yield of school bonds of ten large cities	4.32%
6. Yield of United States long-term bonds (Quotation the middle of January)	3.59%

²The monthly total of school bonds does not include all the bonds issued in the month, due to the difficulty of obtaining the yield on some of the issues.

in the financial papers to see the statement made that bonds have reached a new low price for the year. Of course a low price means a high net interest. The financing of the Federal Treasury

government issue since 1924. Since 1924 government issues have been marketed at a rate as low as 2¾ per cent.

This high interest rate offered by the Treasury is a clear indication that there has been no improvement in the bond market. It also probably indicates that the Treasury does not expect any substantial improvement in the immediate

future. In this position, the Treasury will probably be correct. Unless there is a decided change in the stock market, with a consequent releasing of credit from speculating activity and a reduction of pressure by the Federal reserve banks, it is hardly possible that bond prices can improve substantially. Although it may be becoming a tiresome statement, the school boards should postpone bond issues, if feasible, and use any other short-term means of financing that is available. In case bonds must be issued, the high rates make it doubly important that every condition of the bonds be planned as carefully as possible not to make the rate higher than is absolutely necessary.

The lowest school-bond issue reported sold in February carried a net interest rate of slightly less than 4 per cent. Several issues were sold on a 6 per cent or higher net interest base. Total school-bond sales reported in February were \$19,267,412. This is somewhat larger than the amount reported in February, 1928, but much smaller than the amount reported in February, 1927. School-bond sales of the past few months have averaged much smaller than in corresponding periods of recent years. This reduction in bond issues applies not only to school bonds, but

TABLE III
Bond Sales and Rates³

Year	Bond Sales			Average Rates	
	School	Municipal	All Public and Private	Year	Municipal
1928.....	\$240,000,000 ⁴	\$1,413,000,000 ⁴	\$8,000,000,000	1928.....	4.45
1927.....	\$266,000,000	\$1,509,000,000	\$7,735,000,000	1927.....	4.49
1926.....	260,000,000	1,365,000,000	6,311,000,000	1926.....	4.61
1925.....	323,000,000	1,399,000,000	6,223,000,000	1925.....	4.58
1924.....	288,000,000	1,398,000,000	5,593,000,000	1924.....	4.26
1923.....	206,000,000	1,063,000,000	4,303,000,000	1923.....	4.76
1922.....	237,000,000	1,101,000,000	4,313,000,000	1922.....	4.81
1921.....	215,000,000	1,208,000,000	3,576,000,000	1921.....	5.18
1920.....	130,000,000	683,000,000	3,634,000,000	1920.....	5.12
1919.....	103,000,000	691,000,000	3,588,000,000	1919.....	5.04
1918.....	41,000,000	296,000,000	14,368,000,000	1918.....	4.90
1917.....	60,000,000	451,000,000	9,984,000,000	1917.....	4.58
1916.....	70,000,000	457,000,000	5,032,000,000	1916.....	4.18
1915.....	81,000,000	498,000,000	5,275,000,000	1915.....	4.58
1914.....	42,000,000	320,000,000	2,400,000,000	1914.....	4.38

³By special permission, based upon sales reported by the Commercial and Financial Chronicle.

⁴Not final.

of March 15 gives a good indication of the present bond market conditions. According to reports, the financing was to be \$475,000,000 of nine-month certificates of indebtedness, the interest to be at the rate of 4¾ per cent. The same news article went on to say that the 4¾ per cent interest quoted on the new issue and on the issue of last October is the highest paid by the Treasury on a similar form of security since the period of deflation following the war. Prior to last October, 4½ per cent had not been offered on a

to all other kind of bonds—municipal, industrial, and public utility.

The difficulty of floating bond issues and the high interest rates have been felt at last in reduced building. Building construction in February declined over 20 per cent from February, 1928. January showed almost as large a decline from January, 1928. As was mentioned last month, some of the largest private building companies have evolved schemes of financing building construction by stock issues rather than by

TABLE IV
Average Yield of Long-Term Federal-Government Bonds⁵

Past Twelve Months		Past Six Years	
Month	Rate %	Year	Rate %
1929		1928	3.437
Mar.	3.63 ⁶	1927	3.464
Feb.	3.61 ⁶	1926	3.544
Jan.	3.59	1925	3.797
1928		1924	4.010
Dec.	3.53	1923	4.298
Nov.	3.48	1922	4.301
Oct.	3.55		
Sept.	3.54		
Aug.	3.56		
July	3.50		
June	3.40		
May	3.35		
April	3.32		

⁵Taken from Federal Reserve Bulletin.
⁶Not final.

mortgage bonds. It is an interesting question as to whether schoolmen can find additional methods of financing school building. If the present high interest rates continue for much longer, it will be well to look for other means of financing school buildings.

Table II, in giving all municipal securities sold to date during the year as \$158,000,000, shows the extent of the decline in municipal bond issues. In January and February, 1928, \$235,000,000 worth of municipal bonds were sold, and in January and February, 1927, \$247,000,000. In fact we have to go back to 1921 to find as small a total of municipal bonds sold as were sold in the corresponding period of this year.

TABLE V
Security Prices and Yields⁷

Date	Average Price of 393 Stocks (1926 Average=100)	Average Price of 60 Bonds	Average Yield on 60 High-Grade Bonds
1929			
Mar.	182.4 ⁸	96.4 ⁸	4.67 ⁸
Feb.	186.5 ⁸	96.6 ⁸	4.65 ⁸
Jan.	185.2	97.0	4.60
1928			
Dec.	171.4	97.2	4.59
Nov.	171.1	97.8	4.55
Oct.	159.1	97.5	4.57
Sept.	156.6	97.5	4.57
Aug.	148.3	97.2	4.59
July	144.2	98.2	4.54
June	145.3	98.5	4.50
May	152.1	99.7	4.42
April	145.9	100.3	4.38

⁷As reported by Standard Statistics Company, Inc. Used by special permission.

⁸Not final.

The estimate for 1928 in Table III shows a decrease in school bonds sold, a decrease in municipal bonds, and an increase in all securities sold. The average interest rate on municipal bonds for the entire year 1928 also showed a slight decrease.

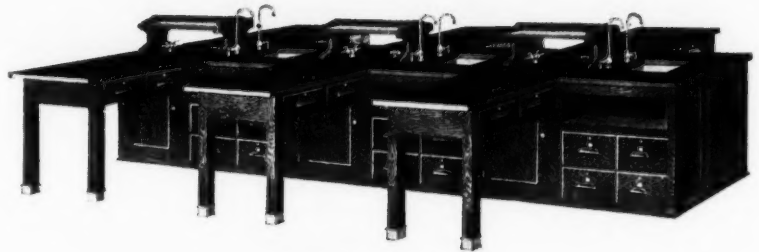
Table IV shows the rise in interest yield on long-term government bonds. April, 1928, shows the lowest average price of bonds for the past twelve months. Although there has been some variation up and down, the general tendency since April, 1928, has been toward higher rates. However, the average rate for the entire year 1928 was lower than any previous year since the war.

As Table V shows, stock prices continue to rise. The final figure for January, 1921, shows the highest monthly average of all time. The preliminary figures for February are even higher, and March is about the same. A large part of this increase in prices of stocks has been brought about by borrowed money. Under different circumstances much of this money might have gone into bonds. It is difficult to see how bond prices can become much better until there is a releasing of credit from stock market speculation. Along with the rising prices of stock, as Table V shows, we have had falling prices of

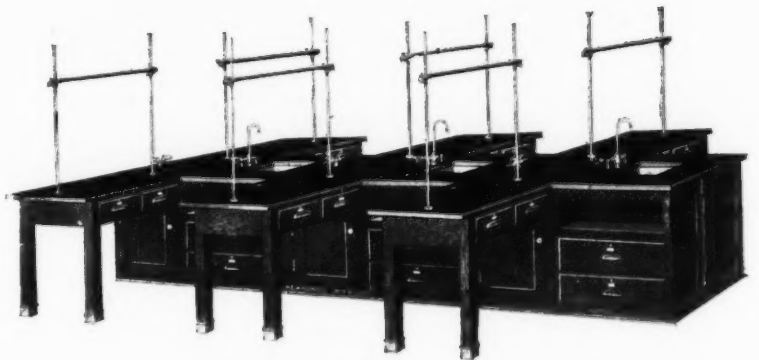
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Note the Advantages of Lincoln Science Desks

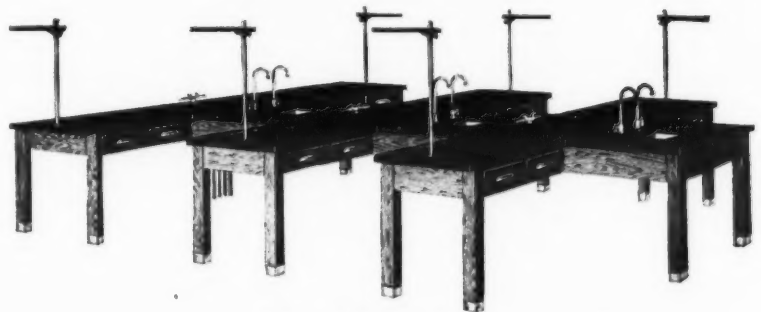
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Can he communicate instantly with any one or *all* of his teachers at once? Can he summon every teacher instantly and simultaneously in an emergency?

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Can he be sure that all his telephone conversations with teachers are secret? Can he supervise the entire system if desired?

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The North "All-Relay" Exchange is a complete Automatic Telephone System especially designed for schools. It meets school needs exactly, giving highest operating efficiency combined with lowest operating and maintenance costs.

The "All-Relay" School Telephone System requires no operator, is always on duty ready to give rapid, reliable and secret service at any time of the day or night. "All-Relay" stands for simplicity and the elimination of all complicated and troublesome station selectors. The latest dial type telephones are used.

"Real Dependability with Low Maintenance Costs" is the testimony of scores of School Officials now using The North "All-Relay" Telephone System.



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THE NORTH ELECTRIC MANUFACTURING CO.
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Here are a few of the scores of schools equipped with "All-Relay" Systems.

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Wellesley, Mass.
Linnfield College,
McMinnville, Ore.
Little Rock High School,
Little Rock, Ark.
University of Detroit,
Detroit, Mich.



DES MOINES SCHOOLS RECEIVE GIFT OF SCHOOL FOR HANDICAPPED CHILDREN

The public schools of Des Moines, Iowa, have recently received a gift of \$250,000, presented by Dr. and Mrs. D. W. Smouse, former residents of the city. The money will be used for the erection of a building for handicapped children, including cripples, and deaf, hard of hearing, speech, and cardiac cases.

Dr. and Mrs. Smouse were well-known and beloved residents of Des Moines in former years and this magnificent gift indicates a most generous and unselfish spirit toward the schools. In presenting this gift to the City of Des Moines, Dr. and Mrs. Smouse have only expressed in a larger way, the inevitable outgrowth of a long life of unending service to humanity.

The present gift will be used for the erection of a building, to be known as the D. W. Smouse Opportunity School. Construction work will begin about July 15, and the building is to be completed and occupied in September, 1930. The cost of the building alone will be \$200,000, while the remaining \$50,000 will be used for equipment and landscaping.

The building will be two stories high, with a department on the roof for open air classrooms and sunbaths. On the first floor will be located a sight-saving class, a sewing room, a cooking room, a lunchroom and kitchen, two manual-training shops, three classrooms for crippled children, a hydrotherapy department, and an administration unit comprising principal's office, waiting room, doctors' and nurses' quarters.

The second floor will provide space for two classrooms for the hard of hearing, one for speech defectives, one sight-conservation room, several special classrooms, and a combined gymnasium-auditorium, with lockers and shower rooms. Ramps

and elevators will be used as means of transportation.

The local school authorities have undertaken a program outlined by Dr. Smouse for the creation of special opportunities and scientific treatment of these classes. It is the purpose to provide a course of instruction that shall meet the physical and mental needs of the children, and that shall offer the closest possible combination of effort between the school and the homes of the children enrolled. To this end, contact will be established between the principal, the nurses, the dietitian, and the parents of the children. It is estimated that 285 children in Des Moines will be eligible for enrollment in the new school, of which the larger number will comprise cripples, and those suffering from cardiac or nervous troubles.

A STANDARD METHOD FOR CALCULATING CUBAGE OF SCHOOL BUILDINGS

The American Institute of Architects has recently revised its method of calculating the cubage of buildings. The new method which is presented in the A. I. A. Document No. 239, is of interest to school authorities who are responsible for figuring the cubage of school-building projects.

Definition of "Standard Cubic Contents":

The cubic content (cube or cubage) of a building is the actual cubic space inclosed within the outer surfaces of the outside or inclosing walls and contained between the outer surfaces of the roof and six inches below the finished surfaces of the lowest floors.

Interpretation:

The above definition requires the cube of dormers, pent houses, vaults, pits, inclosed porches and other inclosed appendages to be included as a part of the cube of the building. It does not include the cube of courts or light shafts, open at the top, or the cube of outside steps, cornices, parapets, or open porches or loggias.

Supplementary Information:

The following items shall be listed separately:

a) Cube of inclosed courts or light shafts open at top, measured from outside face of inclosing walls and from six inches below the finished floor or paving to top of inclosing walls.

b) Cube of open porches measured from outside face of wall, outside face of columns, finished floor and finished roof.

It is recommended that the following items also be listed separately:

a) Square foot area of all stoops, balconies and terraces.

b) Memoranda, or brief description, of caissons, piling, special foundations, or features, if any.

Explanation:

The above specification of "Standard Cubic Contents" is adopted as a method of conveying exact basic facts about a given building to all interested so that they may be subject to verification without misunderstanding. The basic facts should be the same to all. Each will use the figure in his own way. Valuations per cubic foot will vary with classification of the building, with quality as specified or executed, according to the judgment and purpose of the individual appraiser.

Examples:

Cubic contents of buildings shall be stated clearly in form suggested by the following examples:

<i>Office Building of Mr. Blank at Blank Address:</i>	
Standard Cubic Contents	1,750,000 cu. ft.
Supplementary information	
Allowance for caisson foundations	150,000 cu. ft.
<i>Residence of Mr. Blank at Blank Address:</i>	
Standard Cubic Contents	18,500 cu. ft.
Supplementary information	
Open porches	1,500 cu. ft.
Terraces	200 sq. ft.

PROPOSE BOARD OF SCHOOL COMMISSIONERS OF SCHOOL BUILDINGS

The survey committee which has completed a study of the factors involved in the increased expenditures of the Boston public-school system, has asked that the school board sponsor a bill to be presented in the state legislature calling for the establishment of a board of commissioners of school buildings and a department of school buildings for the city.

As a result of its studies, the survey committee found there had been both delay and waste in the construction and repair of school buildings, due to the fact that the present commission in charge of school-building operations is appointed by the mayor, and is responsible to him alone. It was found that there had been delay in the construction of buildings; in some cases as much as five years had been required for the construction of a high school, and four years for an elementary building. In the purchase of sites, it was found that in a number of instances, land had been taken at an

(Continued on Page 70)

BONDED FLOORS *for the rising generation ' ' from A-B-C days to college*

TODAY they go to school on Bonded Floors! From kindergarten days—when children play in safety on sanitary, smooth-surfaced “game-floors”—down through grammar-school, high-school and university, these resilient cork-composition floors add to the comfort and attractiveness of modern school rooms.

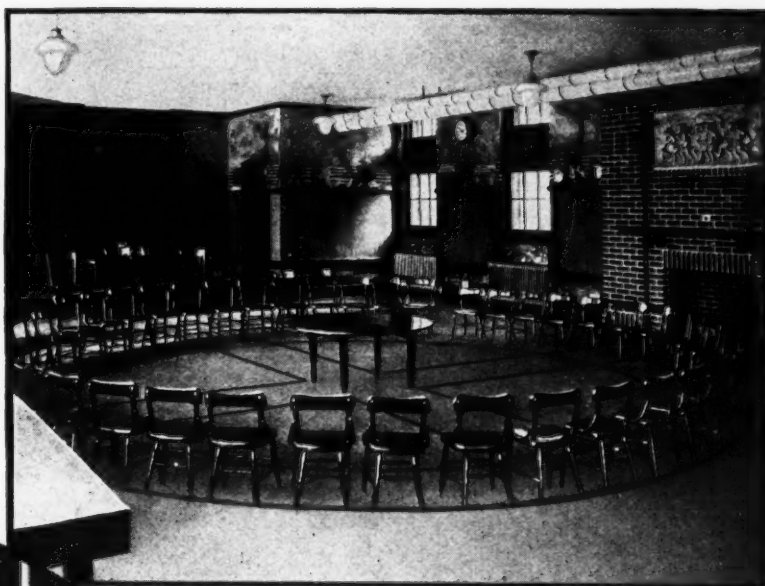
Write us for your copy of an interesting booklet entitled: “Facts You Should Know About Resilient Floors for Schools.”

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A BONDED FLOOR of Battleship Linoleum—in a laid-to-order design—dark colored linoleum strips inset to form a circle and criss-cross. A sanitary and practical “play-floor” in an elementary school.



Above:

CONCENTRATION is easier in classrooms equipped with sound-deadening Bonded Floors. Their resilient surface is pleasant to walk upon and they insulate against heat and cold. Liquids and greasy foods, spilled upon a Bonded Floor of stain-proof *Sealex* Linoleum, are easily cleaned up and leave no disfiguring mark.

At right: **H**ERE footsteps and other distracting noises are muffled by the resilient Bonded Floor. A handsome floor of Treadlite (Cork-Composition) Tile in a luxuriously appointed university library.



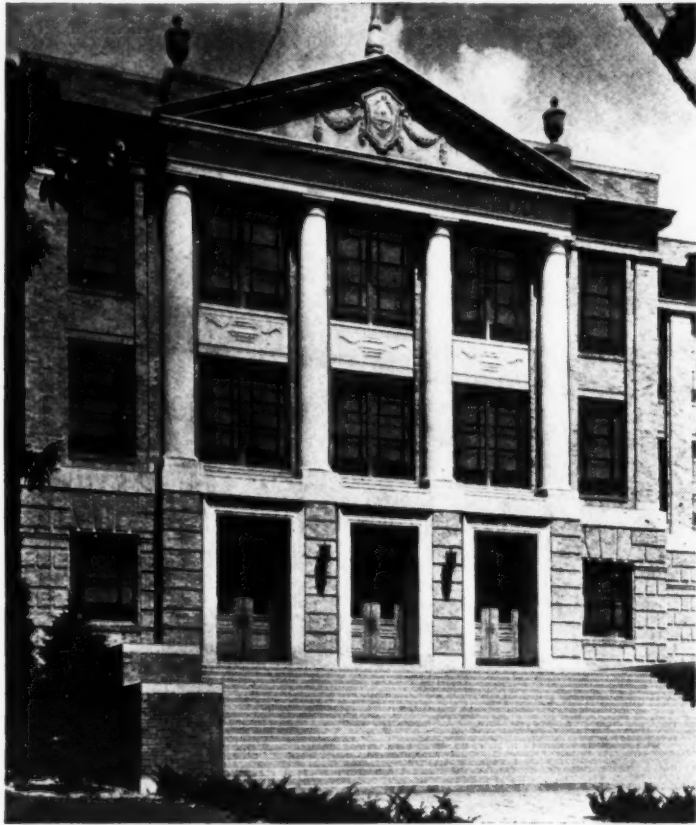
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Hawthorne School, Salt Lake City, Utah.
Abraham Lincoln Junior High School,
Washington, D. C.
McKinley School, Stockton, Calif.
St. Brigid School, Louisville, Ky.
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Impressive, too — is the list of prominent school buildings throughout the country in which Fenestra School Windows have been used.

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(Continued from Page 68)

expense to the city of thousands of dollars and never used for school purposes.

Under the bill, a new board of three members is proposed, whose chief duty will be the selection of a competent man to carry on the construction and repair of school buildings, and to provide for a more efficient and economical agency for building and repairing schoolhouses.

The department of school buildings, proposed under the bill, would be established and operated under the direction of the superintendent of construction, elected by the board of commissioners of school buildings, and would serve at the pleasure of the board of commissioners. He would appoint one or more deputy superintendents, who would have assigned to them the repair and alteration of schools.

A STUDY OF THE VALUE OF SCHOOL PROPERTY IN NORTH CAROLINA

The state education department of North Carolina has recently issued a report covering the value of school property in elementary and secondary schools of the state. The report shows that the total valuation is \$100,929,365, which represents an increase of \$7,036,694, or about 7 per cent over the preceding year.

Of the total, nearly 90 per cent was acquired after 1914-15, or within the past 13 years. During the present decade, the terms of the past two governmental administrations, three fourths of the school property was purchased.

The data show statistically the history of school-house building in the state for the past 20 years. The effect of the world war period is reflected in the figures for 1917-18. The years following the war show the effort made by counties and cities to catch up with building activities stopped during the war. During the years from 1921-22 to 1925-26 disclose the increase in the value of school property as a result of the program of improved state and county roads, consolidation, and the building of schools following the use of the county-wide plan.

According to race, 90 per cent of the total appraised value of school property is used by the white race, and 10 per cent by the colored race. The white school property totals \$90,772,114 and the colored, \$10,157,251.

Along with the increase in the aggregate value of school property has gone a decrease in the number of schoolhouses. In other words, the more recently built schoolhouses have been larger, more

modern and up-to-date, and consequently more costly than the small frame schoolhouses of a decade or more ago. The reports for 1927-28 show a total of 6,279 schoolhouses in use, of which 3,869 are used by white children, and 2,410 by colored children.

The report calls attention to the effect of decreasing the number of schoolhouses, and at the same time increasing the aggregate value of school property. Within the period studied, a great change has taken place. In 1907-08 the average schoolhouse used by white children was appraised at only \$810; now, 1927-28, the average value of school property to the schoolhouse for the race is \$23,369. In 1907-08 a schoolhouse used by the colored race was valued at \$248, whereas in 1927-28 colored school property averaged \$4,215 to the schoolhouse.

The data show that schoolhouse values vary according to the location and race. For 1927-28 the number of schoolhouses and average value per schoolhouse were as follows: In the rural white schools the average value was \$14,155; in the city white schools it was \$121,210; in the rural colored schools it was \$2,019; and in the city colored schools it was \$33,898. It is shown that city-school property is more valuable than rural-school property and that the small schoolhouses are located in rural-school systems where the population is not so dense. As consolidations have been completed, however, and the small schoolhouses are abandoned, the average rural schoolhouse has increased in value.

In considering the value of school property per child enrolled, it is shown that North Carolina ranks eighth among the several states, with a per child value of \$101. The average for the United States is \$189, the range being from \$323 per child in California to \$57 in Arkansas. At present the average value in North Carolina is \$119, for the white race \$148, and for the colored race \$39. It should be noted that over a period of years the per capita value of school property per child enrolled has increased from year to year in nearly all counties. As an indication of the extent of the increase, the number of counties having per capita values in excess of \$100 is shown to be as follows: In 1923-24, 13 counties; in 1924-25, 33 counties; in 1925-26, 39 counties; in 1926-27, 54 counties; in 1927-28, 56 counties. There are eight counties with a per capita value of more than \$200 in rural-school property for the white race.

All city schools have an average per pupil value of more than \$100 for white school property. On an average the larger eight cities have the largest per child value of white school property, \$333. The largest individual value of white school property is in Hickory, where there is an average of \$540 of school property to each white pupil enrolled.

SCHOOL-BUILDING PROGRESS IN FARGO, NORTH DAKOTA

—Mr. E. G. Guthrie, secretary of the school board of Fargo, N. Dak., writing in a recent issue of the local newspaper, commended the board of education for its foresight in the conduct of the school-building program during the past few years, and pointed out that the work must continue if the educational features are to keep pace with the growth of the city in other lines.

The past two years have witnessed a tremendous growth in the school-building program of the city schools. In spite of the fact that more than \$350,000 had been spent during this period in building and improving the schools, at the present time practically all the available space is being used, and new buildings will be necessary within the period of a year or two.

"The schools," said Mr. Guthrie, "are the greatest single industry of any community. The development of the school system must be kept ahead of the present needs and must have an outlook for the future expansion of community possibilities. By so doing it will be possible to accommodate the largest number of persons who will be drawn to it because of the development which has been so pronounced."

BUILDING NEWS

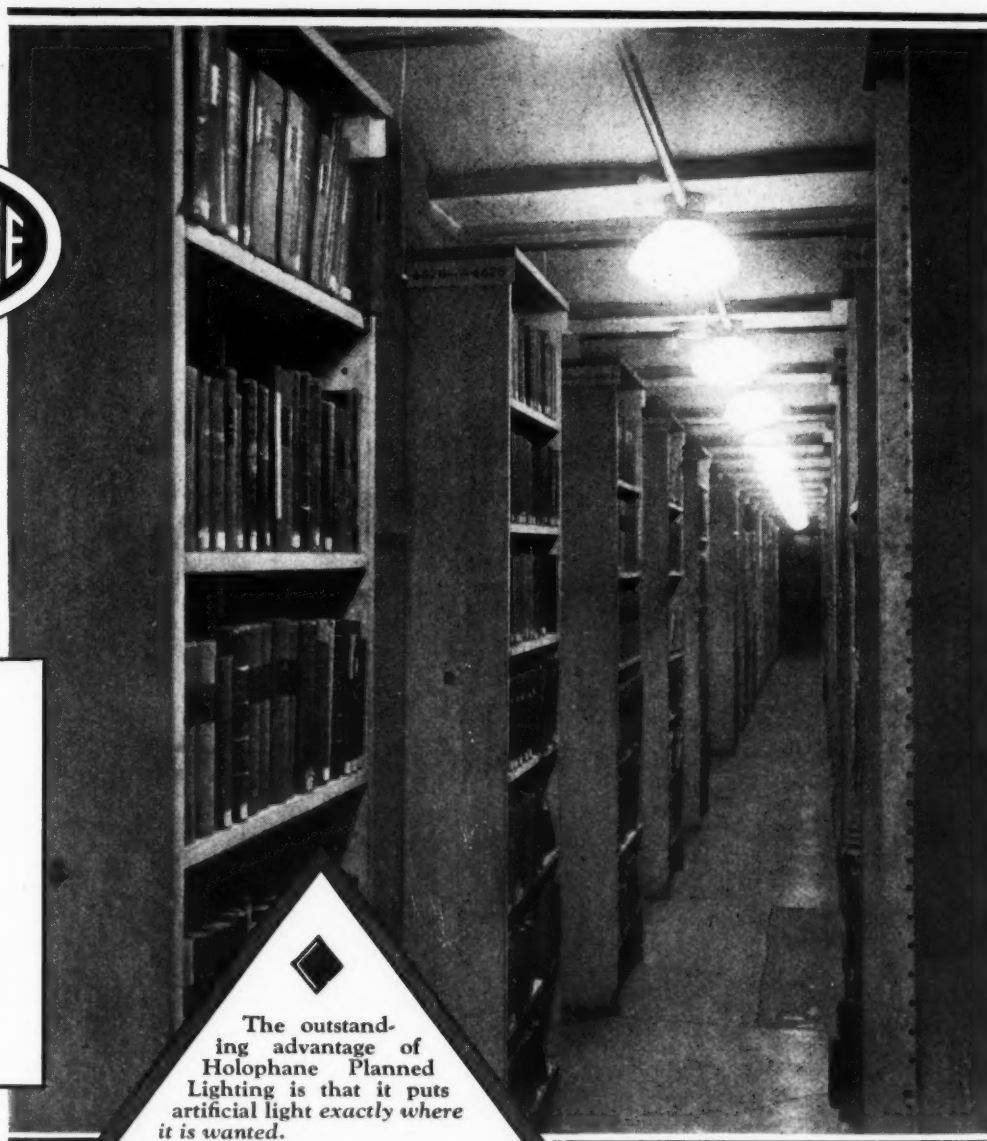
—Port Arthur, Tex. The school district recently disposed of \$200,000 worth of school bonds at a public sale. The bonds bear 4½ per cent at par and carry accrued interest. The proceeds of the bonds will be used for enlarging the grade school for colored pupils, which will be completed at a cost of \$350,000.

—Bronxville, N. Y. The school board has let the contract for the building of an addition to the school building. The building will house the students of the junior high school and will provide additional accommodations for pupils of the elementary schools. It will provide a library, a cafeteria, and two playrooms, in addition to classroom space,

(Continued on Page 72)



Holophane Unit No. 02176, shown above is the Holophane Specific for library bookstack lighting.



The outstanding advantage of Holophane Planned Lighting is that it puts artificial light exactly where it is wanted.

In library bookstacks, for example, light is needed on the vertical surfaces of the books—not an easy place to get it. Yet Holophane Unit No. 02176 puts it there, as this photograph of a bookstack corridor in the Boston Public Library clearly shows.

Notice the remarkably even illumination on the titles of the books—at the very bottom of the stacks as well as the top—between the lighting units as well as directly under them—in brief, searching yet glareless light on the title of every book.

Think what this means to library staffs: books quickly located without straining and squinting; eyes fresh and relaxed even after a day, or evening, of concentration.

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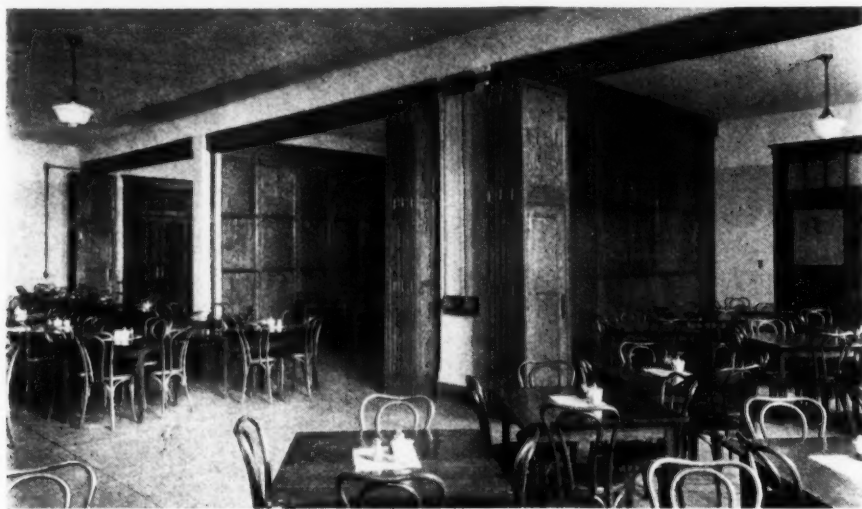
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CIRCLE A FOLDING PARTITIONS
...Sound Proof...

(Continued from Page 70)
and will be erected at a cost of \$623,879, excluding architect's fees and equipment.

—The citizens of Mendota, Illinois, on February 11, carried a school-bond issue in the amount of \$100,000. At the election a total of 844 votes were cast and the proposition was carried by 87 votes. The proceeds of the bond issue will be used for the erection of a grade and junior-high-school building to cost \$125,000.

—Bryan, Tex. The contract has been let for the construction of an elementary school, to be erected at a cost of \$90,000. An additional unit will be erected for the Bowie School, at a cost of \$30,000.

—Calvert, Tex. Bonds in the amount of \$15,000 and additional funds have been voted for the erection of a new school for colored pupils. The building will be a Rosenwald structure and will be used as a county training school for negroes.

—Plainview, Tex. The school board has completed the erection of two new schools and an addition for another school. A site has been purchased for another building. The tentative plans for a school-building program call for the erection of a new high school.

—Cleveland, Tenn. The new Arnold School was recently completed, at a cost of \$135,000. The building which will take care of elementary and junior-high-school pupils, will be occupied in September, 1929. The Mayfield School, occupied last September, was erected at a cost of \$40,000.

—Cranston, R. I. Two fireproof school buildings are in process of erection. One of these buildings is a six-room primary school, and the other is a sixteen-room grammar school which is being enlarged for use as a junior high school.

—Brenham, Tex. A new school has recently been completed, at a cost of \$180,000. The building has been arranged and equipped for domestic and manual-arts work, in addition to the regular academic subjects.

—Mission, Tex. A new auditorium has just been completed for the Roosevelt elementary school, at a cost of \$25,000.

—Hartsville, S. C. A new addition recently completed for the high school, contains an auditorium, a gymnasium, and four offices, in addition to four classrooms. The building was erected at a total cost of \$42,000. Messrs. Wilkins & Hopkins, of Florence, were the architects.

—Mobridge, S. Dak. The General Beadle School was recently occupied. The building which houses five hundred pupils, was completed at a cost of \$70,000.

—Murfreesboro, Tenn. A new grammar school has been erected, at a cost of \$50,000. Plans are in preparation for a nine-room negro high school, to be erected shortly in the suburbs.

—Providence, R. I. With the opening of the next school year, three junior high schools will be opened for use. Plans have been begun for four additional schools, to be completed within the next two years at a cost of \$1,250,000. With the completion of these seven buildings, the city will have a junior-high-school system completely equipped for modern educational needs.

—Buffalo, N. Y. A bond issue of \$1,000,000 has been approved for school construction purposes.

—The voters of Sandy Creek, N. Y., have approved an appropriation of \$163,000 for a new school.

—A generous gymnasium and assembly hall costing \$25,000 has been made possible for the high school at Fonda, N. Y., through a gift of Mr. L. N. Littauer. The gift has been accepted by the board of education with appreciation for Mr. Littauer's interest in education. The gift is the second one to educational institutions within a year, since he had previously given to the city of Gloversville a \$200,-

TOO MANY TEACHERS

The main consideration in the training of teachers and in improving the economic welfare of teachers is not the teachers themselves, nor the teacher-training institutions; it is the children in our schools. They ought to be taught by the men and women who approximate, as nearly as possible, the ideal personal and mental characteristics of the best teacher. Hence, select those who are to become teachers. Let the number selected and trained be in keeping with the number needed. Then there will be assurance of employment and tenure, and living wage. Education has no more justification for uneconomic practice than has industry, which is none.—Clyde R. Miller, New York City.

000 swimming pool which is being operated under the direction of the local board of education.

—The citizens of Farmingdale, N. Y., have approved an appropriation of \$350,000 for a junior-senior high-school building. The school will contain 21 rooms, an auditorium, a library, and a gymnasium.

—The new Central Rural School at Treadwell, N. Y., has recently received a gift of an endowment fund of \$100,000, with a further endowment of \$5,000 for the library of the school. The construction of the building was begun May 1, 1928, and it was dedicated on January 24. The building conforms to the most modern practices and requirements of school-building construction and has been named the Abraham L. Kellogg School in honor of a distinguished lawyer.

—Taylorsville, Ind. A new elementary school will be erected in German township, to replace a building recently destroyed by fire.

—Pekin, Ill. On March 14, the school board received bids for three school-building projects, to cost approximately half a million dollars. The program calls for a junior high school, to cost \$340,000, and additions to two schools, to cost \$170,000.

—Lockport, N. Y. A \$500,000 school-building program has been begun by the board of education. The program calls for two new buildings and an addition to a third building.

—St. Joseph, Mich. Supt. E. P. Clark has presented a building program to the school board, calling for an addition to the high school and two new grade buildings.

—Emmetsburg, Iowa. The voters have approved a school-bond issue of \$130,000 for a new school building.

—Toledo, Ohio. The school board has adopted a school-building program to include a senior high school, a junior high school, and two elementary schools, to cost approximately \$3,000,000.

—Hillsdale, Mich. The taxpayers and school patrons have begun plans for a school-bond election for three new schools.

—Hollis, Okla. The school board has completed an extensive school-building program at a cost of \$195,000. The next project of the board will be a new senior high school, to cost \$100,000.

—Dayton, Ohio. The school board has under-

(Continued on Page 75)

"Good As New After 22 Years"

RODDIS FLUSH DOORS were installed in East Technical High School, Cleveland, twenty-two years ago. 3000 day and a large number of night students attend this school, and the custodian estimates that the doors have swung open 12 to 15 million times—adding, "we have never had to repair or replace any door and they are all in as good condition today as the day they were installed."

Such evidence as this proves the permanency and exceeding value of Roddis completely solid, cross-unit construction: and the economy and everlasting service assured by Roddis design and quality.

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F. S. Barnum, (deceased) Architect.
Geo. M. Hopkinson, Present
School Board Architect.



RODDIS FLUSH DOORS

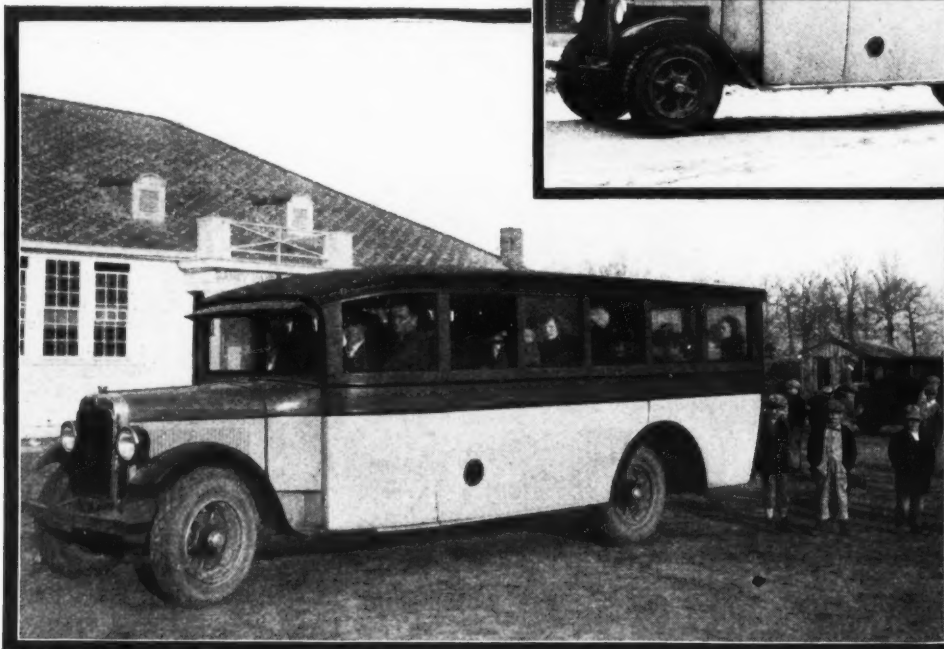
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Pleased with the exceptional performance and low upkeep of one Dodge Brothers Bus C. A. Paul, contractor at Gibsonburg, Ohio, purchased four more Dodges. The five are shown above.

In all weathers the two Dodge Brothers Buses (right) transport the children of the Shenango Township School at New Castle, Pennsylvania.

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Showing Classroom Use.

Better Than Walls for Dividing Rooms

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The "Gym" may be divided into a number of separate groups whenever desired.

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7. May be made to harmonize with wood-work of any room.
8. Perfect operation because of our service and installation offices in principal cities.

(Continued from Page 72)

taken a new school-building program, to include a normal training school and a new elementary school.

—Sacramento, Calif. The school-building program of the board of education for this year includes a \$60,000 school building for the Crocker school, for which Messrs. Starks and Flanders are the architects. Plans have been prepared for alterations and additions to six school buildings.

—Architects Davis, Pearce & Company of Stockton, Calif., have plans in preparation for three school buildings, a high school at Willetts to cost \$115,000, another high school at Livermore to cost \$150,000, and a third at Ukiah, to cost \$150,000.

—San Francisco, Calif. Plans have been prepared by W. H. Crim, Jr., of San Francisco, for a group of junior-high-school buildings for the Park Presidio district. An appropriation of \$800,000 is available for the work.

—Albert Lea, Minn. The school board has taken action toward the expansion of the school plant. The board has employed a Chicago architectural firm to prepare plans for several new units.

—Fairmont, Minn. The school board has received bids for a junior-high-school addition to cost \$185,000. A grade-school building, to cost \$125,000, is under construction.

—Houston, Tex. The school board has undertaken an extensive school-building program. The program will be financed with the proceeds of a \$4,000,000 bond issue voted last year.

—Madison, Wis. The city council has been asked to approve a school-bond issue of \$550,000, of which \$400,000 will be used for the construction of the West Side High School and the Franklin elementary school. The construction work will be financed through current funds of the city during the next summer, the bond issues to be floated as of Dec. 1, 1929.

—Moline, Ill. The school board has voted to submit to the citizens a school-bond issue in the amount of \$475,000 for the erection of junior high schools and grade buildings.

—Carrollton, Mo. At an election held on February 12, the citizens approved a school-bond issue of \$140,000 for erecting and equipping two grade schools. The proposition carried by a vote of 670 to 172, which was almost a four-to-one majority.

—Johnson City, Tenn. The board of education has begun work upon a \$500,000 school-building program, which will include additions to the high and grade schools, and the building of the first units of one or two new elementary schools. One of the elementary schools was recently enlarged, making it suitable for the platoon type of organization. It is planned to reorganize additional buildings as platoon schools.

—The new high school at Pecos, Texas, was dedicated on Sunday, February 17, with a program of music and speeches. The building has a library, a gymnasium, and an auditorium, in addition to classrooms. The building has been completely equipped with the latest and best in furniture and apparatus. Mr. J. R. Humphrey, the present superintendent of schools, has been head of the school system for the past six years.

—Macon, Mo. At a school election held on February 5, the citizens approved a school-bond issue of \$135,000, the proceeds of which will be used to remodel a school building, to purchase a site, and to erect a junior-senior high school. The bonds were sold on February 21, at a premium of \$437 at par, with interest at 4½ per cent.

—A recent report of the bureau of buildings of the New York City school board shows that a total of forty new school buildings and additions, with a total capacity of 70,600 sittings are now under contract. For the third successive month the total sittings under contract has increased, the present total being the largest of any month since July, 1925, when 70,894 sittings were under contract.

In contrast to the number of new sittings under contract is the steady decrease in the number of

THE SUPERINTENDENT

By the same token no man is competent to be a superintendent of schools, unless he owes his first allegiance to the children of the city. He must accept the theory and act upon it that the schools are not established and maintained for the sake of the parents, nor for the sake of the teachers, nor for the sake of the politicians, nor for the sake of any private interest whatsoever, but that they are solely for the children.—Thomas W. Gosling, Akron, Ohio.

sittings, plans for which are in preparation. The total for this month, 20,147, is the smallest reported for the past five years. The previous low total was 22,991 on May 1, 1925. The present total continues the steady decrease since December 1 last, when 31,202 sittings were planned. It is also below the record total of 70,745 on February 1, 1924.

—Des Plaines, Ill. An eight-room addition has been built for the South Division School, at a cost of \$80,000.

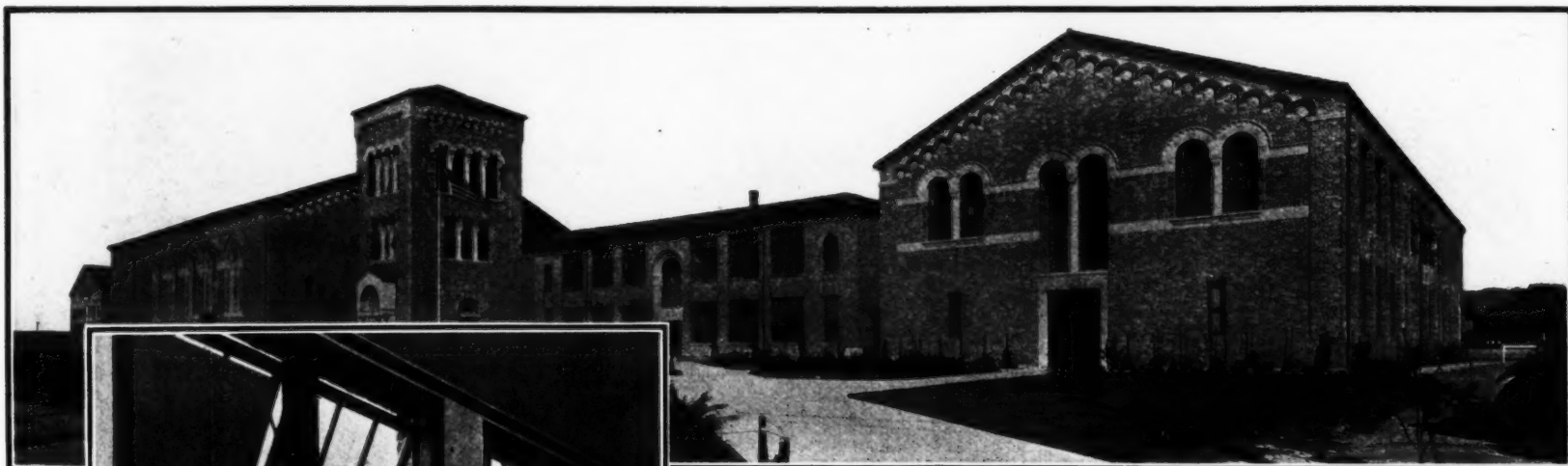
—Warren, Ohio. The board of education has offered for sale school-building bonds in the amount of \$210,000, which were recently voted by the citizens at a regular school-bond election. The proceeds of the bonds will be used for school-building purposes.

—Chicago, Ill. An increase in school revenue through the leasing and selling of vacant property not required for school purposes has been recommended by Mr. Ernest Withall, business manager of the board of education. Mr. Withall points out that vacant property is not only a liability to the board, but large plots of ground lying idle are detrimental to the progress of the communities in which they are located. At present the board of education owns considerable vacant property which has been idle and producing no revenue over a long period of years. The board owns all the land in the block bounded by Madison, Monroe, State, and Dearborn Streets, one of the highest valued blocks in the city.

—New York, N. Y. The board of education has reaffirmed its plan to spend \$5,900,000 for the construction of the new Brooklyn Technical High School. The city board of estimate has proposed to decrease the appropriation about \$1,000,000. It is the purpose of the board to erect a building to accommodate fully 5,500 students, or 1,500 more than the present number enrolled, so that the building will not only serve present needs but will make provision for future expansion as the need arises.

—A recent report of the board of education of St. Louis, Mo., for the school year ending June 30, 1928, contains a statement of the progress of school-building construction for the year. The report shows that the board had in use at the close of the fiscal year 1928, 137 schools conducted in 240 buildings, and 102 portable buildings, also three residence buildings used for special school

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purposes. There were a total of 116 portable buildings, of which 102 were frame and 14 were steel.

Among the new buildings were the Warwick School, the Lowell School, and the reconstruction of the Central High School and the Arlington School.

The total expenditure for new buildings and permanent improvements amounted to \$1,397,113, of which \$1,034,880 was expended from the general fund for new buildings, and \$59,518 was devoted to permanent improvements of buildings.

—San Diego, Calif. Construction work has been begun on the first two units of a high school which is to include eventually a group of seven buildings. Plans have been completed for a three-story classroom and auditorium building, to be erected at a cost of \$400,000.

—Tell City, Ind. A new high school was recently completed, at a cost of \$250,000. The building has a combined auditorium-gymnasium, an administration room, science and laboratory rooms, and offices, in addition to 27 classrooms. The building was planned and erected under the supervision of Messrs. Charles Troutman of Evansville, and Clifford Kreisle of Lancaster.

—Maplewood, Mo. At an election held on February 25, the citizens approved a school-bond issue of \$158,000 for school-building purposes. The proceeds of the bond issue will be used for the construction of the second unit of the high-school building, the first unit of which is in process of construction. It is planned to erect additional units as the buildings are needed. The complete structure will be erected on a ten-acre tract and will cost approximately \$1,000,000.

—Graceville, Minn. The voters of the school district recently approved the sale of \$78,000 in bonds for the erection of a new school. The school board has employed Messrs. Broaten & Foss as the architects, and will receive bids for the construction work.

—Indianapolis, Ind. With the completion of school-building projects costing \$1,685,000 under way or to be started this year, the school-building needs of the city will be more nearly filled than ever before in the history of the city. With the exception of two or three portable school plants, and the replacement of old buildings, the school authorities are practically abreast of the building program.

Plans and specifications have been completed for a new high school, to cost \$600,000. Other new buildings include three elementary schools and two additions.

—Mt. Vernon, N. Y. The tentative school-building program of the school board makes provision for the relief of congestion in the eleventh ward. The board will erect a number of additions to elementary schools which it is expected will afford some relief for the next three years.

—Baltimore, Md. Mr. William D. Lilly, president of the public-school alliance, recently asserted it is a crime to hamper the work of the school board and charged a majority of the school improvement commission with delaying construction of new buildings under the \$10,000,000 school loan. The statement was made as the result of differences between the board and the commission as to the expert to be employed to pass judgment on the plans of proposed buildings.

It appears that the city administration opposes the employment by the board of Dr. George D. Strayer. Mr. Lilly pointed out that Dr. Strayer was the expert for the commission when the \$21,000,000 school loans were extended. The mayor considers Dr. Strayer's ideas too extravagant and is opposed to \$1,000,000 schools.

At present plans for five schools are in hand for approval but await only the judgment of an expert to be retained by the school board. The law governing the expenditure of the \$10,000,000 loan provides for the employment of a school-building expert.

—Flint, Mich. The board of education has approved a building program for 1929, calling for the erection of two new schools at a cost of \$1,000,000. The Hemphill unit will comprise a senior high school, a junior high school, an elementary school, and an athletic field, and will be erected in the near future, at a cost of \$2,400,000.

—Crystal Falls, Mich. The board of education has ordered a change in the insurance policies covering school buildings from five to three years, because of the changing building prices and markets dealing in rebuilding materials. The buildings will be reappraised every three years, with a great reduction in insurance cost.

—Chinook, Mont. The citizens recently approved a school-bond issue of \$30,000 for completing the school building and for improving other buildings of the school plant.

—Blair, Nebr. The school board recently disposed of \$135,000 in bonds at a public sale. The bonds were sold to a Lincoln bond house at par, with 4½ per cent interest. The proceeds of the bond issue will be used for the erection of a new school.

—St. Joseph, Mo. Five school buildings are provided for in the survey report of Mr. W. B. Ittner, which has been approved by the citizens' advisory council. The plans include a new senior high school and four grade schools. The program will now be presented to the school board for approval.

—East Moline, Ill. The citizens will be asked to approve a plan for an addition to the high school to accommodate at least 1,200 students. The voters will be asked to approve \$210,000 in bonds for the construction work on the building.

—New Orleans, La. The school board has been warned by the city attorney that contractors employed in the construction of school buildings must comply with the law which requires that mechanics must be citizens and qualified voters of Louisiana. Contractors now engaged in the construction of school buildings have been ordered to observe this law.

—Lincoln, Nebr. The school board has begun the preparation of plans for the final unit of the operation and maintenance plant. The building will house the stores department, the various shops of the school board, and a laboratory.

—The division of schoolhouse planning of the state of Alabama has issued its annual report, in which it shows that a total of 148 buildings, additions, and auditoriums, were completed during the year, at a cost of a million and a half dollars. The entire cost of the work, including the drafting of plans, blue prints, and specifications, was only \$24,609, or less than two per cent of the cost of construction of the buildings.

In addition to drafting plans, the staff of the department inspected 169 new buildings costing \$1,593,000; inspected 175 repair jobs costing \$56,300, and 65 equipment jobs costing \$25,000. The cost of construction planned was estimated at \$965,000.

—Springfield, Mo. The school board recently disposed of \$1,500,000 in school bonds to a bonding concern in St. Louis, at par value. The proceeds of the bond issue will be used for school construction purposes.

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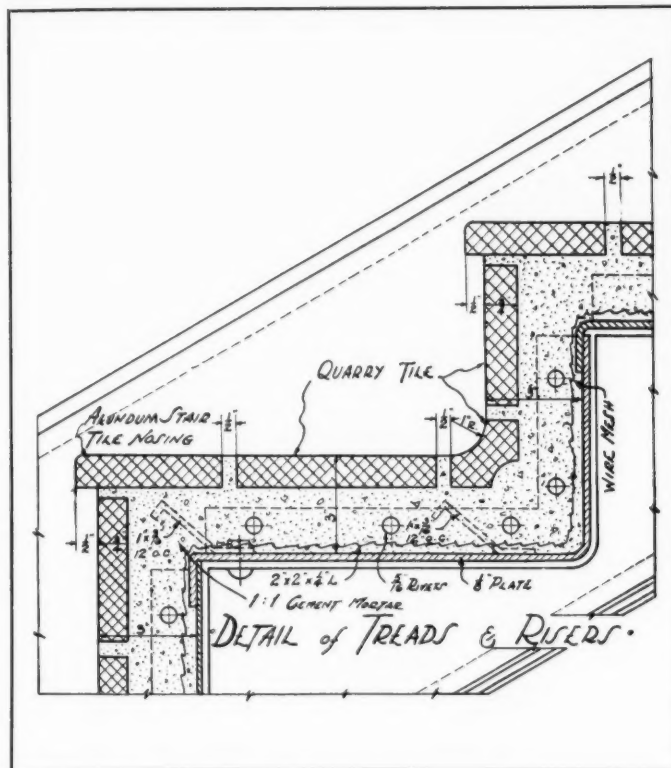
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Superintendents

—MR. GUY WHITEHEAD, formerly assistant superintendent of schools at Louisville, Ky., has been elected superintendent of schools at Lexington, succeeding the late M. A. Cassidy. Mr. Whitehead will assume his new duties next September.

The work of Mr. Whitehead in Louisville has been for the greater part of the time in the junior high schools. He is a graduate of Peabody College and holds two degrees given by that institution. He had taught at Western State Teachers' College and at Peabody College, and had charge of the 1927 summer school of the University of Louisville. During the past six years he had been assistant to Supt. B. W. Hartley at Louisville.

—MR. ROY BOWERS has been reelected as superintendent at Bristol, Va., for a new term of four years.

—MR. C. E. CLAAR has been reelected as superintendent at Cambridge, Nebr.

—MR. W. MCCOLLOM has been reelected as superintendent of schools at Medford, Okla.

—MR. ALBERT ALLEN, formerly superintendent of schools at Gladwin, Mich., died at his home in Frankfort after a brief illness.

—MR. E. J. WILLMAN, superintendent of schools at Owosso, Mich., has been reelected for a new three-year term, with a salary of \$5,700 the first year, \$5,900 the second year, and \$6,000 the third year.

—MR. JAMES M. STEVENS, superintendent of schools at Ocean City, N. J., has resigned, the resignation to take effect at the close of the school year.

—SUPT. B. J. CLINE of Bucklin, Kans., has been reelected for the school year 1929-30.

—SUPT. E. M. EVERHART has been reelected as

head of the schools of Parker, S. Dak., for a fifth term.

—SUPT. G. O. BROBAUGH of Willmar, Minn., has resigned after a service of ten years as head of the schools.

—SUPT. ARNOLD GLOOR of Crookston, Minn., has been reelected for a fourth year.

—SUPT. G. L. JENNER of Bay City, Mich., has been reelected for a seventh term of three years.

—SUPT. C. L. SONE of Slaton, Tex., has been reelected for an eighth term.

—MR. C. A. BEAVER of Yankton, S. Dak., has been elected superintendent of schools to succeed Henry Bullesfield.

—SUPT. R. E. LANE of East Lansing, Mich., has resigned after a service of six years.

—SUPT. G. M. TURNER of Devine, Tex., has been reelected for another term of two years.

—SUPT. W. A. ROSENE of Callaway, Nebr., has been reelected for a new three-year term, at an increase in salary.

—SUPT. C. M. HORN of Bad Axe, Mich., has been reelected for a new term of two years.

—SUPT. E. W. MACKEY of Milan, Mich., has been reelected for a fourth term.

—SUPT. L. C. GEE of Greenville, Tex., has been reelected for his twenty-third consecutive term.

—MISS MYRTLE SCOVILLE, superintendent of schools at Hartington, Nebr., for the past two years, will resign at the end of the school year.

—SUPT. D. R. MCQUILKIN of Roanoke, Va., has been reelected for a new four-year term, beginning with July 1.

—SUPT. J. M. MACON has been reelected at Gorman, Tex., for a seventh consecutive term. During his period of service, a new high school has been erected, new departments have been established, and the rating of the high school has been raised.

—MR. JOHN R. HALL, formerly principal of the high school at Weston, W. Va., has been elected superintendent of schools to succeed Mr. A. D. Horton, who has gone to Ridgefield, Conn. Mr. Hall is a graduate of Otterbein College and holds a degree

given by West Virginia University. He has completed postgraduate work in Ohio University, Michigan University, and Pittsburgh University.

—DR. GEORGE E. CARROTHERS has recently been appointed director of the division of university inspection of high schools for the University of Michigan, succeeding Dr. J. B. Edmonson. Dr. Carrothers has had a fine background of training and experience for the position and is well known to many of the school people of Michigan through his activities as high-school inspector and his work as instructor in the summer session of the university.

—SUPT. R. R. ROGERS of Jamestown, N. Y., died on February 26. Mr. Rogers had completed 38 years of service in the city schools, the greater part of which was spent as superintendent. At his twenty-fifth anniversary, celebrated in May, 1915, Mr. Rogers was the guest of honor at a reception and dinner at which all the teachers and board members were present.

—MR. O. D. ZELLNER has been reelected as superintendent of schools at Graceville, Minn., for a fourth consecutive term.

—MR. H. S. ARMSTRONG of Galva, Iowa, has resigned to accept a position with a Chicago bonding firm.

—SUPT. J. R. JONES of Sublette, Kans., has been reelected for another term.

—MR. JOHN C. HANSEN of South Sioux City, Nebr., has been elected superintendent of schools at Osceola, Iowa.

—SUPT. C. H. MAXSON of Pipestone, Minn., has been reelected for a fifth term, at a salary of \$3,600 per annum.

—MR. IRVING W. SMITH has been elected superintendent of schools at Great Falls, Mont., to succeed S. D. Largent.

—SUPT. F. R. POWERS of Amherst, Ohio, has been reelected for another term of three years.

—MR. RUSSELL S. HILBERT has been elected superintendent of schools at Sebawaing, Mich., to succeed L. D. Randall.

—SUPT. A. D. VANAKEN of Dexter, Mich., has been reelected for a fourth consecutive term.

—SUPT. A. L. COOK of Harbor Beach, Mich., has been reelected for a seventh consecutive term.

(Concluded on Page 80)

DAHLSTROM

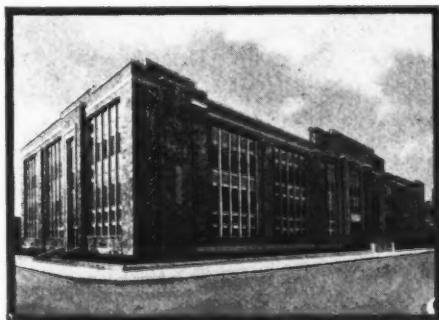


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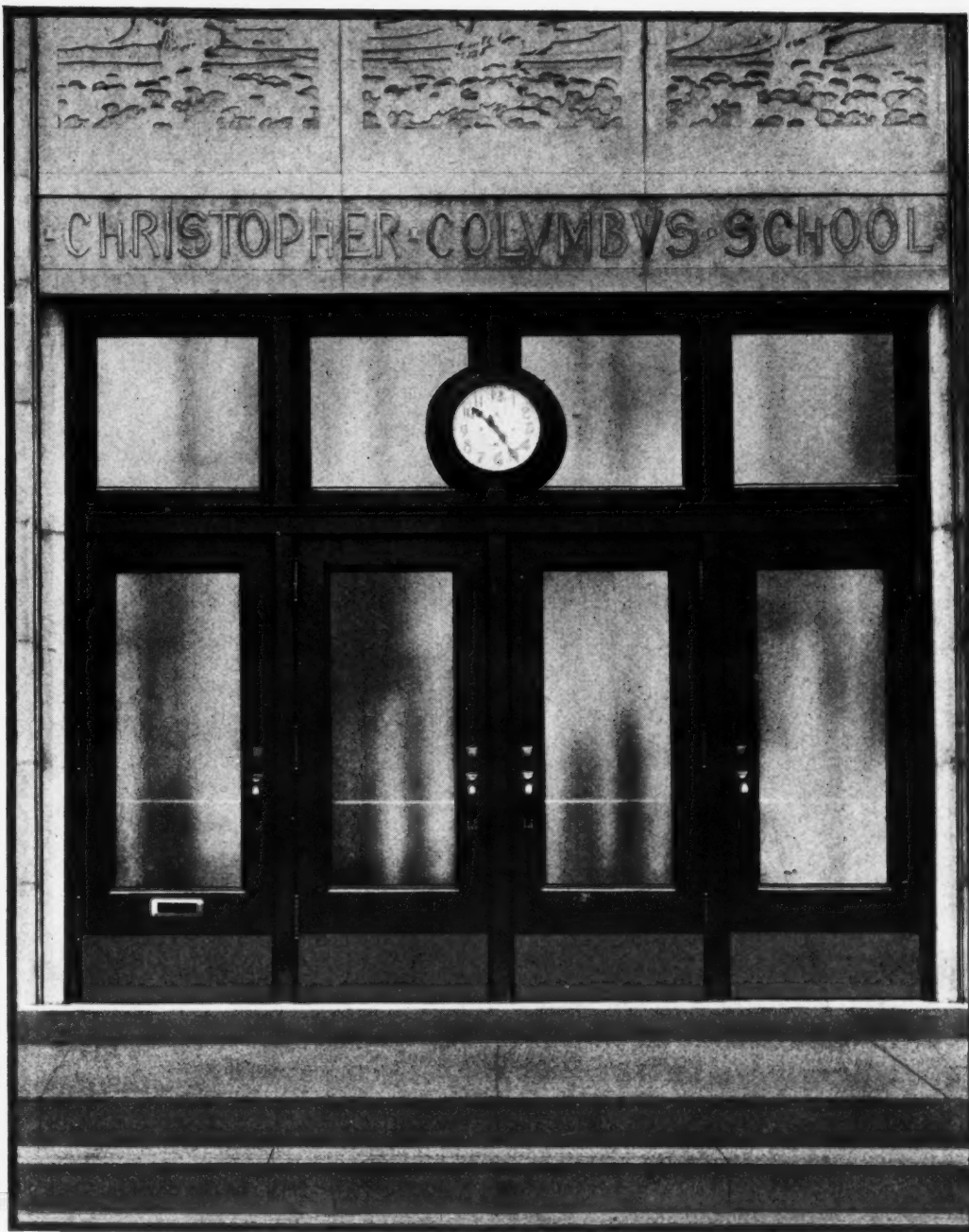


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(Concluded from Page 78)

—SUPT. E. K. BARDEN of Humble, Texas, has been reelected for a fifth consecutive term.

—SUPT. E. C. DEERING of Marshall, Tex., has been reelected for another two-year term.

—SUPT. S. G. SKAALAND of Sandstone, Minn., has been reelected for a third term.

—SUPT. E. R. FOSS of Wabasha, Minn., has been reelected for another year.

—SUPT. W. C. RABE of Dodge Center, Minn., has been reelected for a sixth consecutive term.

—SUPT. W. O. LIPPETT of Fergus Falls, Minn., has been reelected for a twelfth consecutive term.

—SUPT. C. D. YATES of Kellogg, Idaho, has been reelected for another year.

—MR. RALPH BROOKS of Cedar Rapids, Nebr., has been elected superintendent of schools at Hartington.

—MR. C. L. BOOTH of Newport, Wash., has been elected superintendent of schools at Pasco.

—MR. J. M. ERICKSON of Hillsdale, Mich., has been elected superintendent of schools at Hazel Park.

—MR. MILO H. STUART, principal of the Arsenal Technical High School, Indianapolis, has been elected president of the Department of Secondary School Principals of the National Education Association. MR. H. V. CHURCH of the Sterling Morton High School, Cicero, Ill., is the new secretary.

—SUPT. R. E. COTANCHE of Lawton, Michigan, has been reelected for a fourth consecutive term.

—SUPT. H. OSTERGAARD of Bloomfield, Iowa, has been reelected for a two-year term.

—MR. F. H. BARBEE of Kansas City, Mo., has been elected superintendent of schools at St. Joseph.

—MR. JOHN T. HEFLEY has resigned as superintendent of schools at Ponca City, Okla.

—MR. C. F. CAPPS has been reelected as superintendent of schools at Tupelo, Ky., for another term of three years.

—SUPT. J. L. DEIBERT of Gregory, S. Dak., has been reelected for a two-year term.

—SUPT. W. G. BALLENTINE of Menomonie, Wis., has been reelected for a new three-year term.

—SUPT. L. A. HOLLAND of Fairmont, N. Dak., has been reelected for another year.

—SUPT. D. S. YAPE of Wayne, Mich., has been reelected for another three-year term.

—MR. V. L. BEGGS has been elected superintendent of schools at Elmhurst, Ill., to succeed Miss Lydia Vautsmier.



—MR. HENRY CUNNING has resigned as superintendent of buildings and grounds at Terre Haute, Ind.

—MR. JEROME WHALEN, of Fall River, Mass., has been elected as custodian of school buildings for the board of education. The appointment is for a two-year term and carries a salary of \$3,000.

—MR. T. A. JONES has resigned as a member of the Lemon township school board of Middletown, Ohio, after a service of 43 consecutive years.

—Because Carl Roethig, candidate for superintendent of schools of Ashland county, Wis., voted in Bayfield county during the last election, and has been principal of a Bayfield school for three years, he has been declared ineligible for the office he seeks in Ashland county. His name was not stricken from the ballot, but if he defeats Richard Taggart, the other candidate, the election will be declared illegal.

—MR. C. J. Gesme, of Morristown, S. Dak., has resigned as chairman of the school board for the reason that he is leaving the city.

—MR. JAMES BONAR, superintendent of school buildings at Pittsburgh, Pa., has been reelected, at a salary of \$7,500 per annum; MR. C. M. MCKEE, superintendent of supplies, at a salary of \$7,000 per annum; and MR. HENRY O. EVANS, school controller, was reelected, at a salary of \$4,000 per annum.

—MR. OWEN COUNCIL has been elected president of the school board at Mission, Texas, to succeed Mr. S. M. Duffie, who resigned after a service of twelve years.

—MR. HARRY D. PAYNE has been employed by the school board of Humble, Texas, as architect for the school system. Mr. Payne was formerly supervising architect for the Houston public schools, having been associated with Mr. W. B. Ittner of St. Louis.

—Cranston, R. I. The board of education has recently been reorganized with the reelection of four former members and the election of five new members. The membership of the board now includes MR. E. BUTLER MOULTON, president, MR. HENRY D. C. DUBOIS, MRS. ELIZABETH G. DEVERE, MR. R. J. HILL, MR. ARLOE LITTLEFIELD, MR. C. C. RAY, MR. E. C. RATHBUN, MR. R. M. BRAYTON, and MAYOR FRANK C. SPECK, exofficio member.

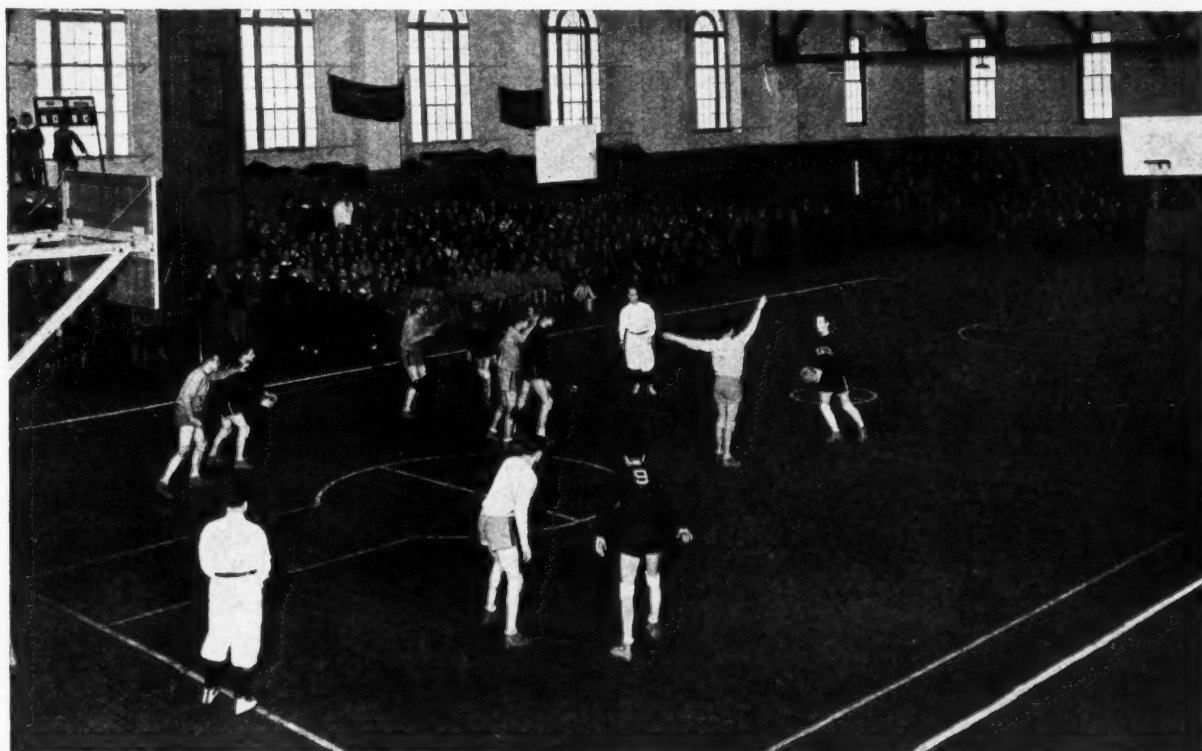
—MR. THOMAS J. BLAIR, JR. was recently elected a member of the board of education at Weston, Va. Mr Blair is the first alumnus of the high school to be elected to the school board.

—MRS. ANNA GRUMMER has been elected as a member of the school board at Phillipsburg, N. J., to succeed Miss Katherine Stryker. MR. W. H. JOHNSON was reelected to succeed himself.

—MR. GEORGE W. EDELSTEIN, 65, superintendent of school buildings and grounds at Iowa City, Iowa, died at his home on February 14, following an attack of heart failure.

—MR. J. W. ASBURY, superintendent of the East Chicago, Ind., schools, has announced his resignation, to take effect July 1.

—MR. H. L. MILLS has been reelected as business manager of the school board at Houston, Tex. In reelecting Mr. Mills the board complimented him on his remarkable accomplishments during the seven years of his service as business manager of the board.



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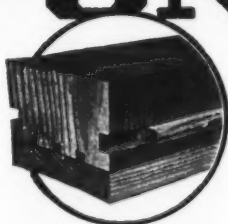
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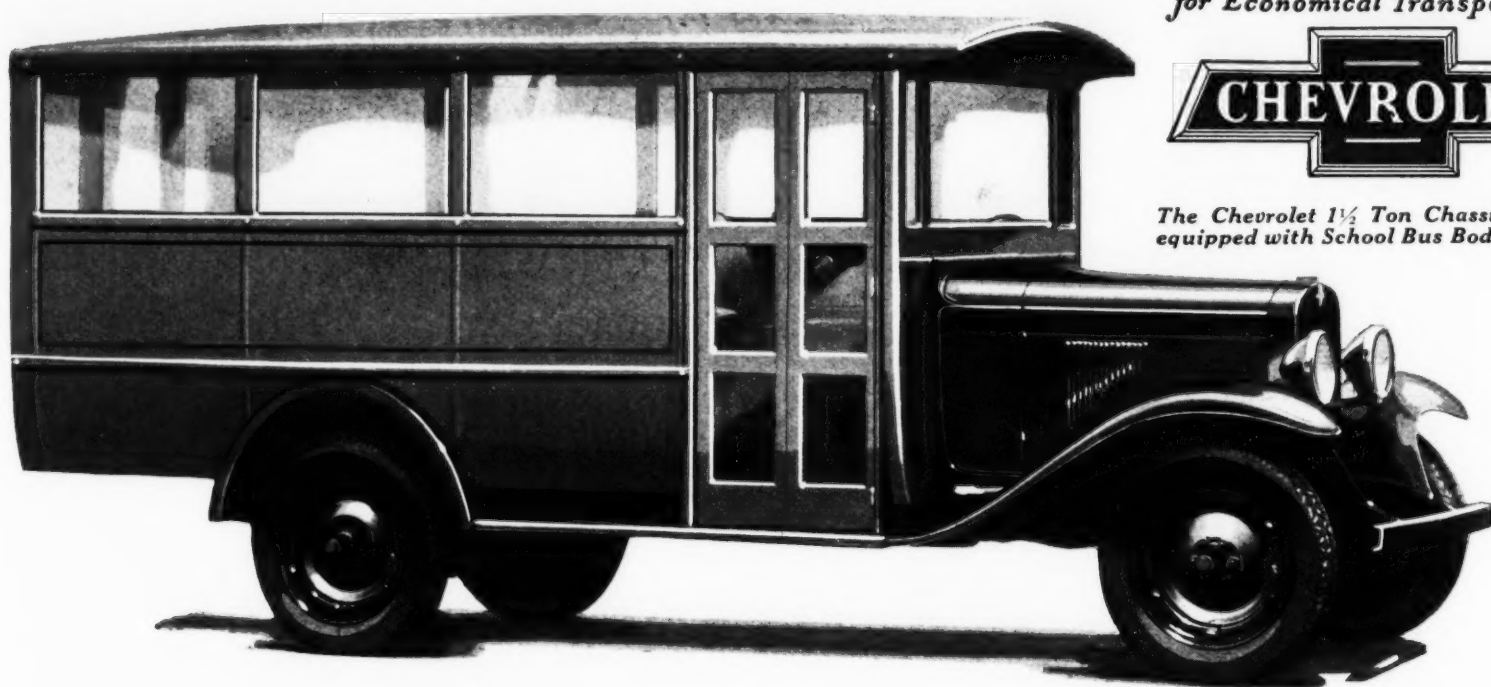
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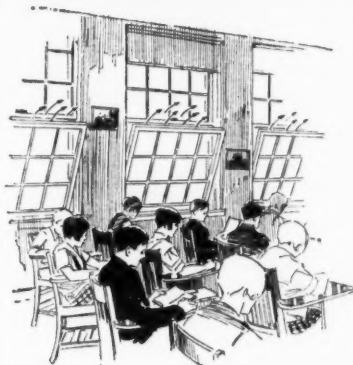
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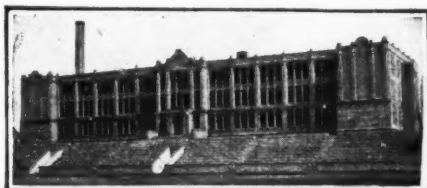
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A SIX IN THE PRICE RANGE OF THE FOUR

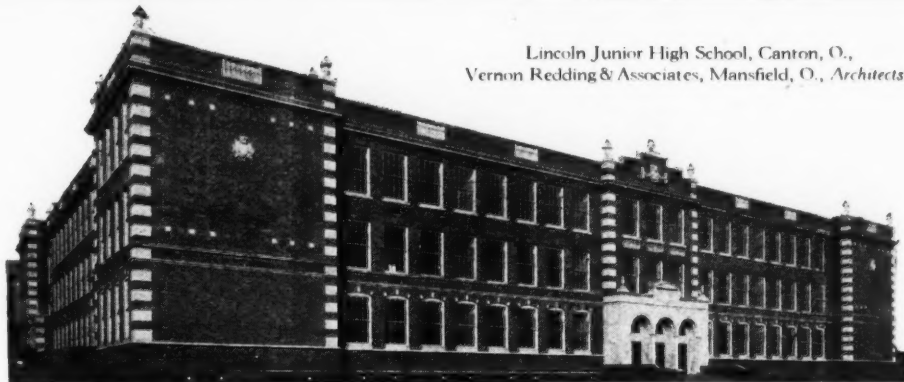


Draftless Ventilation

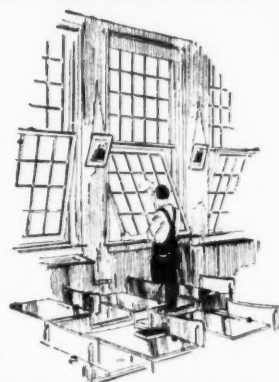
Williams Reversible Window Equipment is particularly well suited to school buildings because it allows the maximum of fresh air, while completely eliminating the draft. An ideal, easily controlled overhead ventilation can be obtained by tilting either sash to any desired angle.



Lehman Junior High School,
Canton, Ohio
Thayer & Johnson, Architects,
New Castle, Pa. and Cleveland, O.



Lincoln Junior High School, Canton, O.,
Vernon Redding & Associates, Mansfield, O., Architects.



Economy in Cleaning

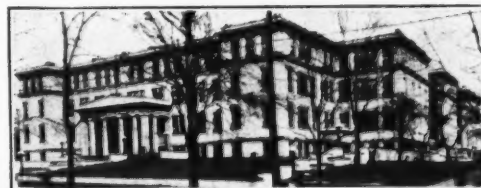
Williams Reversible Window Equipment makes it possible to completely reverse both sash of a window to permit cleaning of both sides of the glass from inside the building. This makes window cleaning easier, quicker and more safe than with ordinary buildings and results in a substantial reduction in cleaning costs.

Williams Equipped Windows in Twenty Canton Schools

Williams Reversible Window Equipment has been installed in twenty new school buildings in Canton, Ohio, in the past twelve years. The first Canton school to use this equipment was the McKinley High School, built in 1917. The latest school to enjoy lower window cleaning costs and improved ventilation through Williams Reversible Window Equipment is the John Baxter School, just completed.

THE WILLIAMS PIVOT SASH CO.

E. 37th St. at Perkins Ave.
Cleveland, Ohio



McKinley High School, Canton, O.
George F. Hammond, Architect,
Cleveland, O.

**WILLIAMS REVERSIBLE
WINDOW EQUIPMENT**
Clean Your Windows from the Inside

SCHOOL LAW

Schools and School Districts

A suit to enjoin an independent school district from levying and collecting taxes in a disputed territory could be maintained only by the state.—Oakwood Independent School Dist. v. Liberty Common School Dist. No. 34, 10 Southwestern Reporter (2d), 174, Tex. Civ. App.

A school district from which lands are sought to be detached by 75 per cent of the electors cannot prevent such action when the statute is complied with (St. 1927, §40.85).—State v. Auer, 221 Northwestern Reporter, 860, Wis.

An order of the board of county trustees attempting to annex the territory of a common school district to an independent district without submitting the question to a vote, is held void (Tex. gen. and sp. acts of the 40th legislature, first called session of 1927, c. 84, §1).—Independent School Dist. v. Lowe, 10 Southwestern (2d), 743, Tex. Civ. App.

A school district is held not liable for the debt of a district consolidated with it, incurred before consolidation and not participated in by its residents.—Barber v. P. S. Cummings & Sons, 145 Southwestern Reporter, 443, Ga.

A consolidated school district, absorbing a district having a contract with a school teacher, was bound to carry out the contract.—Boswell v. Consolidated School Dist. No. 8 of Newton county, 10 Southwestern Reporter (2d), 665, Mo. App.

School-District Government

The board of trustees of a graded school district may fill vacancies in the board only until the next regular election (Ky. statutes, §4471).—Board of Trustees of the Fordsville Graded School Dist. No. 96 v. Oller, 10 Southwestern Reporter (2d), 615, 226 Ky., 89, Ky.

The board of directors could not delegate the authority to the superintendent to determine whether the school should be maintained in the particular schoolhouse (Iowa code of 1927, §4231).—Mulhall v. Pfannkuch, 221 Northwestern Reporter, 833, Iowa.

Quasi corporations such as school districts have only such powers as are granted by the statute.—

Grabe v. Lamro Independent Consolidated School Dist. No. 20, Tripp county, 221 Northwestern Reporter, 697, S. Dak.

School-District Property

The majority electors of a union graded school district cannot be deprived of the right to locate a site for a schoolhouse (Okla. complete statutes of 1921, §10491).—Woods v. Board of Directors of Union Graded School Dist. No. 36, Stephens county, 271 Pacific Reporter, 424, Okla.

The selection by the board of a union graded school district of a site for a school building, ratified by the electors, is valid (Okla. complete statutes of 1921, §10491).—Woods v. Board of Directors of Union Graded School Dist. No. 36, Stephens county, 271 Pacific Reporter, 424, Okla.

The adoption by the board of a union graded school district of plans and specifications for a school building, ratified by the electors is valid (Okla. complete statutes of 1921, §10491).—Woods v. Board of Directors of Union Graded School Dist. No. 36, Stephens county, 271 Pacific Reporter, 424, Okla.

The majority electors of a union graded school district cannot be deprived of the right to select plans for schoolhouses (Okla. complete statutes of 1921, §10491).—Woods v. Board of Directors of Union Graded School Dist. No. 36, Stephens county, 271 Pacific Reporter, 424, Okla.

A school district can make such contracts only as authorized by statute and legal votes at the regular district meeting.—Hatfield v. School Dist. No. 58, 10 Southwestern Reporter (2d), 374, Ark.

The minutes of a school-board meeting providing for the payment of a school is held a limitation on the directors' authority, of which the construction contractor must take notice.—Hatfield v. School Dist. No. 58, 10 Southwestern Reporter (2d), 374, Ark.

A contract for the construction of a school building was void, where no certificate of the clerk was filed as required by the statute (Ohio general code, §5660, as amended by 111 Ohio laws, p. 375).—Southern Surety Company v. Moores-Cooney Co., 163 Northeastern Reporter 575, 29 Ohio Appellate, 310, Ohio App.

That only \$1,000 was left, for acquiring the site and equipping a schoolhouse, is held not to invalidate the contract for the erection thereof.—Woods v. Board of Directors of the Union Graded

School Dist. No. 36, Stephens county, 271 Pacific Reporter, 424, Okla.

A materialman filing a claim more than thirty days after the final acceptance of the improvement could not recover against the surety in excess of the amount withheld in final payment.—Perkins Builders' Supply & Fuel Co. v. Independent School Dist. of Des Moines, 221 Northwestern Reporter, 793, Iowa.

A materialman failing to file a claim and to bring action within the time cannot recover against the surety (Iowa code of 1924, §10313).—Perkins Builders' Supply & Fuel Co. v. Independent School Dist. of Des Moines, 221 Northwestern Reporter, 793, Iowa.

A school-building contract being void, the contractor's surety was not liable for the contractor's failure to perform.—Southern Surety Company v. Moores-Cooney Co., 163 Northeastern Reporter 575, 29 Ohio Appellate, 310, Ohio App.

A surety, assuming the principal's liabilities and obligating itself to complete construction contract, became primarily liable.—Southern Surety Co. v. Sealy Independent School Dist. 10 Southwestern Reporter (2d), 786, Tex. Civ. App.

Cross-action against a surety suing on a construction contract it assumed is held maintainable in its entirety, without joining the principal; the surety being then primarily liable (Tex. statutes of 1925, art. 1987).—Southern Surety Co. v. Sealy Independent School Dist. 10 Southwestern Reporter (2d), 786, Tex. Civ. App.

That the surety completing a building settled with the subcontractor and materialmen upon faith of the finality of the architect's acceptance is held not to stop the owner from impeaching acceptance for fraudulent concealment of defects.—Southern Surety Co. v. Sealy Independent School Dist. 10 Southwestern Reporter (2d), 786, Tex. Civ. App.

The school districts' warrants, accepted by the contractor, showing on their face that the school was to be paid for out of the building fund during the term of years, is held to show the parties did not intend payment at once nor in cash.—Hatfield v. School Dist. No. 58, 10 Southwestern Reporter (2d), 374, Ark.

Teachers

A board's authorization to the directors to hire their own teachers cannot be construed as authority to hire a teacher for a school which the board im-

(Concluded on Page 86)



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Cleanly Walls

—a non-porous flat wall paint that does not absorb dirt or grime, and gives poor lodgement for dust!

Surface dirt easily washed away. Easy washing takes the place of redecorating!

Soft, uniform tones with light dispersion and no disturbing glare!

Shows no laps or brush marks! An oil paint — tough, artistic, economical!

Used on notably fine buildings, schools



Natrona County High School, Casper, Wyo.




Hatch School, Oak Park, Ill.



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and churches everywhere in America.
Before your school is decorated or re-
decorated get the Velumina Color Book.

*Schools in all parts of America are decorated with
Velumina Flat Wall Paint, including*

SARGENT CONSOLIDATED SCHOOLS Monte Vista, Colo.	NORTH CAROLINA STATE COLLEGE Raleigh, N. C.
ST. JOHN'S COLLEGE Annapolis, Md.	HIGH SCHOOL Ardmore, Okla.
ANDERSON SCHOOLS Anderson, Ind.	HIGH SCHOOL Frederick, Okla.
JOHN FLETCHER COLLEGE Oskaloosa, Iowa	CITY PUBLIC SCHOOLS Ogdensburg, N. Y.



Laurel Avenue School,
Wilmette, Ill.



High School, West Allis, Wis.



Lincoln School,
Wauwatosa, Wis.

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ATHEY Cloth-to-Metal Contact Weatherstrips change any wood or steel window from a rattling, loose, drafty sash to one that works smoothly and quietly and is absolutely draft-proof when closed.

ATHEY SHADES are better than ordinary SHADES and AWNINGS combined. They do not cut off the top light as awnings do, and allow a great deal more shaded light to enter than ordinary shades.

Besides being the handsomest shade for any School, Office, Hotel, Hospital or Public Building, ATHEY Shades are practical, as they are instantly adjustable to shade any part of the window.

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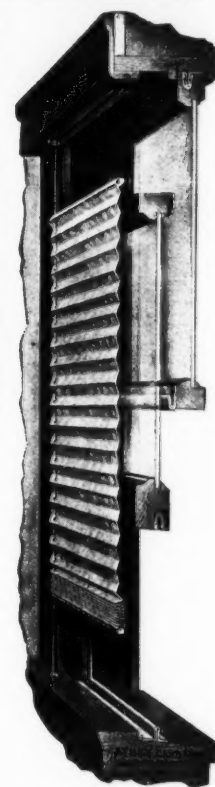
Cloth
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Weatherstrips
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Window Shades

COMFORT goes hand in hand with Learning

This is a cold month. Are your pupils conscious of physical discomfort? If they are they are not learning as they should. Few principals realize what a handicap a cold classroom places upon school averages. Few School Boards know how easily and inexpensively a cold, drafty room may be changed to a comfortable one. Schools short on radiation find that ATHEY cloth-lined weatherstrips eliminate the necessity of an enlarged plant and save the weatherstripping cost in less than three years.

ATHEY COMPANY, 6043 West 65th Street
CHICAGO

Representatives in all Principal Cities and in Canada.



(Concluded from Page 83)
mediately proceeded to close.—*Mulhall v. Pfannkuch*, 221 Northwestern Reporter, 833, Iowa.

A teacher, signing a contract, was bound to know whether the subdirector was authorized to employ her.—*Mulhall & Pfannkuch*, 221 Northwestern Reporter, 833, Iowa.

The president and secretary of the board properly refused to execute the contract employing a teacher for a school which the board closed.—*Mulhall v. Pfannkuch*, 221 Northwestern Reporter, 833, Iowa.

A school district's contract with a teacher, attempting to create a liability against fund of subsequent fiscal year, is held not binding (Okla. constitution, art. 10, 26).—*Board of Education of Independent School Dist. No. 11, Osage county v. McAchrn*, 271 Pacific Reporter, 843, Okla.

A contract for employment as a school teacher must be written, but need not conform to the formal requirements of the statute (Mo. revised statutes of 1919, §§11137, 11138).—*Boswell v. Consolidated School Dist. No. 8 of Newton county*, 10 Southwestern Reporter (2d), 665, Mo. App.

The members of the board of directors could not by individual knowledge and conduct ratify a subdirector's action in employing a teacher for a school closed by the board.—*Mulhall v. Pfannkuch*, 221 Northwestern Reporter, 833, Iowa.

Under an order of the school district selecting a teacher "for coming year," the court could assume both parties were bound for eight months' term (Mo. revised statutes of 1919, §11211, as amended by the acts of 1921, p. 637).—*Boswell v. Consolidated School Dist. No. 8 of Newton county*, 10 Southwestern Reporter (2d), 665 Mo. App.

A school teacher, suing shortly after a school opening, could recover full amount of the contract where another teacher was hired before the school opened, with the knowledge of the plaintiff's contract.—*Boswell v. Consolidated School Dist. No. 8 of Newton county*, 10 Southwestern Reporter (2d), 665, Mo. App.

A school teacher's recovery for breach of an employment contract could not be defeated by failure to appear when school opened, where the defendant alleged the teacher was notified she would not be permitted to teach.—*Boswell v. Consolidated School Dist. No. 8 of Newton county*, 10 Southwestern Reporter (2d), 665, Mo. App.

STATE LAWS GOVERNING COMPULSORY EDUCATION

The U. S. Bureau of Education has recently completed a study of the state laws governing

compulsory education. The study traces the history and progress of the movement toward compulsory education of school children and points to more recent tendencies relating to the length of the period of attendance, the annual required attendance, the provisions for handicapped children and delinquent children, the requirements governing labor permits, and relief for indigent children.

The study shows that the average minimum age for compulsory attendance is 7.36. In 28 states, the minimum age is 7; in 18 states it is 8; in 2 states, it is 6; in 1 state, the minimum is 9.

The average maximum age for compulsory school attendance is 16, and the average number of years' attendance required is 8.65. Only one state, Ohio, requires 12 years of school attendance.

The average minimum term of required attendance annually is 7.23 months, though the length of term varies from 38 weeks in Connecticut, to 3 months in Oklahoma; one state, Alabama, has no minimum school term.

Part-time, continuation, or evening-school education is compulsory under varying conditions in 31 states for persons over 14 years.

The minimum amount of education necessary to exempt children of compulsory age from school attendance varies. In four states, New York, Nebraska, Nevada, and Ohio, require the completion of a four-year high-school course; 39 states require the completion of an elementary-school course; and 6 states do not specify any definite amount of education.

The report shows that attendance through the fifth grade is the average required throughout the country for labor permits under the laws. A total of 17 states require an eighth-grade education for labor permits, while 8 states require the ability to read and write only, and 7 other states appear to have no educational requirements. The ages at which labor permits are granted vary under certain conditions, from 12 to 14, but the most usual is 14.

The tendencies noted with regard to compulsory education are: A lengthening of the period of compulsory attendance by making it effective at an earlier and to a later age; an increase of the annual school attendance; an extension of the compulsory provisions to include handicapped and delinquent children; more rigid educational requirements for exemption and for labor permits; and public relief for indigent children and more supervision with respect to the attendance law.

THE BEAUTIFICATION OF SCHOOL GROUNDS

A contest in the beautification of school grounds has been begun in the schools of Indiana by the Indiana parent-teacher association and the Indiana federation of art clubs, in cooperation with the extension division of Indiana University.

The contest which was opened on January 1, has for its purpose the stimulation of interest and greater activity in the planning and planting of school grounds, in order that the schools of the state may become beautiful and inviting spots in their own communities.

The schools entering the contest will be judged in three groups: (1) rural one-room schools, (2) rural consolidated schools, and (3) town and city schools. The plan involves first, the interest of the entire community in the plan; including teachers, school children, school boards, and school officials; second, the actual projects, the plans for planting, and the actual planting of the grounds; third, the type of materials used in the completed plan.

The contest will be judged by a state committee of six persons, according to a special schedule based on a point system. In judging a school, the participation of the community will count fifteen points, that of the teachers and school children fifteen points, that of the school boards and officials fifteen points, the planting plan fifteen points, the planted plan fifteen points, the use of native trees, shrubs, and plants ten points, the use of devices other than planting ten points, and the utilization of special natural features of the grounds five points.

The contest closes on December 1, 1929.

COMMEND SERVICES OF MR. RHYN

The school board of Stillwater, Minn., recently adopted a resolution, commending the services of Mr. Peter Rhyh, chief custodian of the school system. The resolution was published in the local papers and attracted much favorable attention from the community.

Mr. Rhyh, who has served the schools for the last forty years as instructor in manual training, janitor, and chief custodian of the buildings, is still strong and active, and young in spirit. He commands the love and respect of the school children and his services have proved most valuable to the school board and the school district.

John stands at *the* *Head* of the class — Joe at *the Foot*



DUPLEX-A-LITE *Will Help Both*

JOHN is bright and ambitious. He reads and studies more than most. At home and in school the lighting is none too good. This promising child is beginning to show symptoms of eye strain which will handicap him all his life.

Joe is naturally backward. School work comes hard for him. His eyes are weak and poor vision doubles his discouragement. Better lighting may be just the margin between his "passing" and "failing".

How many "Johns" and "Joes" are in your schools? About one out of every eight children there. A joint committee of the National Education Association and the American Medical Association, after a study of tests conducted on nearly five million children, reports "about twelve percent defective vision among school children in the United States".



Bad lighting in homes and schools is only one cause of this defective vision and eye strain, but it is an important cause. No school can afford to have any but the best artificial illumination. Even in dollars and cents, poor lighting costs far more in unnecessary and expensive student retardation.

There are definite reasons why Duplex-a-lite is the best light for schools. It is a balanced blend of 20% *direct* and 80% *indirect* illumination, closely

approximating, in its clear and restful quality, the daylight from North windows. With Duplex-a-lite there are no sharp shadows, no eye-straining glare.

Duplex-a-lites are attractive fixtures. They are easy to keep clean and cost less to maintain. Write for a free installation in one or more rooms of your present schools.

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When you come to New York, visit our permanent Exhibit in the Scientific American Building, 24 West 40th

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THE SAFETY FACTOR

in Selecting Stair Treads



For confirming evidence, see the list of installations in our Stair Tread Bulletin.

There's the safety factor for every day use. Accident prevention demands a non-slip stair tread. Alberene Stone has that quality. The countless grains of silica embedded in the stair-tread stone (special quarry selection) give it just the right degree of abrasive surface.

Alberene Stair Treads resist wear but are agreeable to walk on. School architects of standing give them preference.

Then there's the emergency safety factor. In case of fire you certainly want stairs whose treads will stand heat. Alberene Stone Stair Treads will stand the test of a torch without chipping or flaking. Heat them and turn a hose stream on them—still they will stand up.

In serviceability, Alberene Stair Treads are worth more, yet their cost is not out of line. Make them part of your plan.

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ALBERENE STONE



THE LEGAL RIGHTS OF THE TEACHER

A teacher in Indiana has the same right to punish a pupil as a parent has a child. This was the statement of a judge in municipal court in Indianapolis in dismissing an assault and battery charge against Homer G. Knight, an Indianapolis principal. Knight was arrested by a mother whose 12-year-old son had been paddled for disobedience.

"Within the bounds of moderation," the judge said, "a teacher may inflict corporal punishment. It is the consensus of judicial opinion that a teacher within the limits of his jurisdiction has the same right to punish a pupil as the parent has a child."

"The court is of the opinion that unreasonable or excessive punishment was not inflicted," the judge said. "Under the proof presented, the lad was not paddled in anger or with much severity."

"In the school, as in the family, there should exist on the part of the pupils the obligation of obedience to lawful and reasonable commands, civil deportment and respect for the rights of other pupils. These obligations are inherent in the school system and constitute a common law of the schools."

"Whenever opportunity arose, this boy would become disobedient and flagrantly disregard the rights of other pupils. He seemed to revel in his disrespect for teachers and fellow-pupils."

SIOUX CITY ADOPTS TEACHERS' SERVICE STANDARD

At the present time there appears to be a desire to get away from the old-time secret marking of teachers' ratings by administrative school officers. There is no reason why each individual teacher should not feel that she knows the attitude of her principal, of the supervisors, and the superintendent toward her work. There is nothing quite so helpful as the sitting across the table and consciously discussing work with each other, always from the standpoint of constructive helpfulness.

With the purpose of assuring absolute fairness to all teachers, the board of education at Sioux City, Iowa, has adopted a service standard for teachers. Under this new standard, all secret markings of teachers have been eliminated and each rating given is open to the inspection of the teacher. The principals and the superintendent hold themselves in readiness to discuss frankly with each teacher any rating given. It is the belief of the school authorities that the welfare and happiness of the teachers, as well as the betterment of the school system, will be advanced if all parties concerned in the plan give it their entire support.

Under the plan, each teacher is encouraged to ask for an interview with her principal early in the second semester, for the purpose of taking over her reaction to the standard. The first consultation is held sometime during the first month, or not later than the first six weeks of the second semester, for the purpose of taking over her reaction to the standard. This gives each teacher an opportunity to strengthen any points which the conference indicates need emphasis.

During the last week before the spring vacation, each principal is asked to file a score card with the superintendent, upon which he makes an estimate of the teacher's point-scale grade. Principals are asked to secure score cards from the office in plenty of time so that they may be in readiness. It is the privilege of the teacher to know what this estimate is before it is sent to the superintendent's office. Each teacher is accorded a private interview with her principal before the ratings are filed in the office. The value of the service standard is found in the frankness with which teachers, principals, and superintendents discuss these problems.

The principal is asked to indicate upon each score card whether or not a personal interview with teachers has been held. These reports are filed in the office of the superintendent not later than March 23.

The service standard has proved an excellent opportunity for the principals to talk over the work of each teacher in a confidential and helpful way. It guarantees that every teacher will be clear in her own mind that the principal and director are her friends. She is encouraged to go to them with matters of weakness, since it is the desire of every true principal and director that all elements of weakness shall be removed. Through the estab-

lishment of a teacher-measuring scale, the school authorities expect to reduce failures in teaching to a minimum.

TEACHER TRAINING IN NEW CASTLE, PA.

A plan of teacher training based on the co-operative idea has been adopted by the school authorities of New Castle, Pa. By an arrangement with the Slippery Rock Teachers' College and Westminster College, a group of 100 young men and women are receiving their practice teaching in the New Castle schools this year.

Under the arrangement, seniors of the Teachers' College are in training for a period of nine weeks in the elementary schools. Two student teachers are assigned to each training teacher for that period. During the year, each training teacher is responsible for eight students.

Seniors of Westminster College are in training for a period of one month in the junior or senior high schools. Two students are assigned to each training teacher for that period.

With the opening of the second semester, a total of 59 seniors of Westminster College have begun their practice teaching in the New Castle schools.

Two students are assigned to each training teacher for the period of one month. During that time the student teachers give their full time to teaching and observation. No college work is required of them during that period. During this time it is the duty of the training teacher to give the student teachers as rich and valuable a teaching experience as is possible. Some of these teachers will ultimately become regular teachers in the local schools.

During the first week the student teachers spend their time largely in observation, the preparation of the lesson plans, and in assisting in the routine work of the school. During the second, third, and fourth weeks they seriously undertake the work of teaching. Before a student teacher attempts to teach a lesson, he is required to prepare a lesson plan, and his lessons must be carefully examined and criticized by the training teacher.

Student teachers who do not approach their work with an earnestness of purpose and a faithful effort to learn the difficult process of teaching are rejected without discussion. Those who show little progress, or a lack of the fundamental characteristics of the successful teacher are not certified to the college as having done satisfactory work.

(Concluded on Page 90)

"FOR Classroom and Gymnasium Hard Maple Flooring Ranks First"

. . . William B. Ittner, *Architect*



Public School, Greenfield, Ohio



Grade School, Battle Creek, Michigan

MAPLE FLOORS IN COLOR—By a new special staining process—the Marietta-Murphy Finishing System—Northern Hard Maple Flooring may now be given a variety of beautiful, lasting color finishes. Standard finishes as follows:

EARLY AMERICAN	AUTUMN BROWN	DOVE GRAY	PASTEL GREEN	SEAL BLACK
SPANISH BROWN	SILVER GRAY	ROYAL BLUE	ORCHID	NATURAL

MAPLE FLOORING MANUFACTURERS ASSOCIATION
1780 McCormick Building, Chicago

The letters **MFMA** on Maple, Beech or Birch flooring signify that the flooring is standardized and guaranteed by the Maple Flooring Manufacturers Association, whose members must attain and maintain the highest standards of manufacture and adhere to manufacturing and grading rules which economically conserve these remarkable woods. This trade-mark is for your protection. Look for it on the flooring you use.

MFMA

Public money must be used wisely . . . especially in school building. More and more, architects, school boards and superintendents are coming to realize the wisdom of flooring with the one flooring material that combines warmth, resiliency and comfort with the qualities of lasting wear . . . Northern Hard Maple is the answer.

Recommendations from all parts of the nation bear testimony to this increasing acceptance of Hard Maple as the superior flooring for schools. Chief among these is the following from William B. Ittner, St. Louis, Missouri, widely recognized as an outstanding school architect of the country:

"Hard Maple flooring for the class room and gymnasium ranks first in our opinion as a wearing surface . . . the grain is dense and the wood takes on a splendid finish and resists wear. School seats can be secured in place and will stay, owing to the holding power of screws in Maple.

"We are still using Maple flooring after more than a quarter of a century's experience with it, which is the best recommendation we can offer."

Northern Hard Maple is resilient, remarkably tough-fibred and tough-grained. It will not splinter or splinter. Scuffing, youthful feet and the moving of equipment only make it smoother with time. Northern Hard Maple actually out-wears stone!

In addition, Maple, because of its permanent smoothness, is easy to clean and keep clean. It offers no open lodging places for dust and germ-laden dirt to collect. And it permits quick, simple, permanent anchorage for seats.

Hundreds of school boards have been guided by these facts in selecting flooring. They have chosen Maple for schoolrooms, corridors, gymnasiums, assembly halls. Consult your architect about Northern Hard Maple.

Members of the Maple Flooring Manufacturers Association have contributed many thousands of dollars and years of work to standardize and improve the manufacture and grade uniformity of Northern Maple, Beech and Birch Flooring.

The following manufacturers only are licensed to use the Association Trademark **MFMA**

Cobb & Mitchell, Inc.	Cadillac, Mich.
Cummer-Diggle Company.	Cadillac, Mich.
Flanner Company	Blackwell, Wis.
Foster-Latimer Lumber Co.	Mellen, Wis.
Holt Hardwood Company	Oconto, Wis.
Indiana Flooring Company (Mill at Reed City, Mich.)	New York, N. Y.
Mitchell Brothers Company	Cadillac, Mich.
Nichols & Cox Lumber Co.	Grand Rapids, Mich.
North Branch Flooring Co.	Chicago, Ill.
Northwestern Cooperage & Lumber Company	Gladstone, Mich.
Osgood & Blodgett Mfg. Co.	St. Paul, Minn.
Oval Wood Dish Corporation	Tupper Lake, N. Y.
Robbins Flooring Company	Rhineland, Wis.
Sawyer Goodman Company	Martinez, Wis.
Soo Lumber Company	Gladstone, Wis.
Stephenson, I. Co. Trustees	Wells, Mich.
Ward Brothers	Big Rapids, Mich.
Wells, J. W. Lumber Company	Menominee, Mich.

Floor with Maple

Let our Service and Research Department assist you with your flooring problems . . . Write us.

MODERN SCHOOLS

Step Out of the **Dirt**!



KEEP FLOORS AND DESKS CLEANED AND POLISHED WITH

Shine-All

TRADE MARK REG. U.S. PAT. OFF.

HILLYARD CHEMICAL CO.
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Shine-All, a strictly neutral liquid cleaner, cleans, polishes and preserves every surface with less labor and expense. Besides being recommended for the maintenance of all types of floors SHINE-ALL also cleans and polishes finished wood-work, painted, varnished and enameled surfaces. Shine-All cannot harm the surface since it contains no caustics, lye, ammonia or abrasives.

School desks are an important part of the schoolroom. Their care and maintenance is of utmost importance. SHINE-ALL not only cleans, but replaces the dirt and stains with a high lustrous sheen. Shine-All makes it easy to give the children a clean, safe surface on which to work. The protection against stains and wear given by the Shine-All preservative sheen creates a substantial economy in itself.

(Concluded from Page 88)

The New Castle school authorities believe that they are in position to render an important service to the State of Pennsylvania in offering training-school facilities to a college. It is the purpose to maintain the integrity of the training service at any and all times.

A TEACHER'S CONTRACT

The school board of Hamilton, Mont., in order to facilitate the work of selecting and appointing teachers, has adopted a teacher's contract form and application blank. The contract form contains the date of employment, the salary, and a clause which states that the teacher agrees to perform her work to the best of her ability and to comply with all the rules and regulations of the school. The contract is shown herewith:

Teacher's Contract

1. You will be paid one-tenth of the annual salary at the close of each school month; at the close of the school year you will receive the tenth installment, provided:
2. In case you resign after signing this contract, if elected, you will forfeit one month's salary.
3. In case of your marriage during the life of this contract the Board may, at its option, declare the contract forfeited.
4. If absent from duty on account of personal sickness you will be allowed full pay for each day's absence not to exceed five days in any semester.
5. In case of resignation during the term of school on account of personal illness, or in case you are released from your contract by the Board of Education, the tenth payment will be pro rated for the time of actual employment.
6. Before entering upon your employment the Board of Education may require that you file with the clerk of this district a certificate from the physicians appointed by the Board of Education showing that you have no contagious or infectious disease and in particular that you do not have tuberculosis, unless you have already filed such certificate.
7. When requested by the Board of Education you shall be re-examined by said physician. If found to have a contagious or infectious disease or tuberculosis your contract may be terminated by the board.
8. The acceptance of this appointment carries with it an agreement to conform to all the laws, rules and regulations governing said schools.
9. Failure to sign and return this contract to the clerk before the.....day of.....192..... will be considered a declination and the position will be declared vacant.

BOARD OF EDUCATION OF DISTRICT
NO. 3, RAVALLI COUNTY, MONTANA.

By....., Clerk.

I hereby accept the above appointments and promise to fill the position to which I am assigned to the best of my ability, and pledge a cheerful conformity to all the laws, rules and regulations governing said school.

Dated.....

NOTE—Section 1087 Revised Codes provides: "Should any teacher employed by the board of school trustees for a specified time leave the school before the expiration of such time, without the consent of the trustees in writing, said teacher shall be guilty of unprofessional conduct, and the certificate of such teacher may be suspended."

The application blank contains the date, the name and address of the teacher, age, whether married or single, training, college or normal-school credits, teaching experience, subjects taught, and other pertinent information.

RETIRING UNSATISFACTORY TEACHERS

—New York, N. Y. Under a new rule of the board of superintendents, "unsatisfactory" teachers who have resisted official action to remove them from their teaching positions, and have refused to apply for retirement, will be subject to a new procedure.

Under the new system, a teacher who is brought before the board charged by the principal with "unsatisfactory" service due to mental incapacity, will be referred immediately to the board of retirement. Should the teacher refuse to seek retirement, trial by the superintendents will continue. If the principal presents sufficient evidence to establish unsatisfactory service, the teacher may be recommended for discharge from the school system.

The plan, it is believed, will compel each teacher to establish her mental capacity before a competent body and will remove the necessity for the superintendents to prove unsatisfactory service.

Within recent years the board of superintendents have encountered considerable trouble in disposing of cases of unsatisfactory teachers whose mental capacity had been questioned, but who refused to comply with the request for retirement, with the result that the school officials' hands were tied.

TEACHERS AND ADMINISTRATION

—Hannibal, Mo. The school board has adopted a rule, giving teachers five days of sick leave each year. The rule is retroactive to September 1 of last year. Under the plan, teachers who have been in the school system for five years or less, will be given one-half pay for not more than five days a year, in case of absence due to illness. Full pay will be given for not more than five days a year where teachers have taught more than five years.

—The state council of education of Pennsylvania has approved new regulations of the state education department providing for higher requirements for the certification of teachers. Under the new

regulations, certificates will not be issued to teachers having less than two full years of professional training for the grades, three years for the junior high school, and four years for the senior high school, in addition to a full four-year high-school course.

Previous to 1921, all subjects taken by teachers in the normal schools were enumerated on the face of the diploma, and the holder was entitled to teach any of them. After July 1, 1929, no subject will be included on the teacher's certificate unless at least eighteen semester-hours of work in that branch has been taken. Formerly, a two-year course was sufficient for the certification of physical education teachers, but this has now been advanced to three, and it will probably be raised to four within a short time. This year, for the first time, every subject taught by teachers in the junior and senior high schools and in special classes of the state were checked against the certificate held by the teacher.

It is believed the next step will be a requirement of certification for all principals in order to insure thoroughly trained persons for the work.

—The oversupply of teachers in the New York City elementary schools will continue for some years, and from present indications will grow increasingly more serious, according to the board of education. At the present time there is a waiting list of 2,097 teachers, of whom 426 are men. This is more than four qualified teachers for each vacancy. Many of these names have been on the eligible list for nearly two years.

At the January examinations there were 2,357 candidates. The board makes only about 1,500 appointments during a school year, so that these candidates face a wait of two or more years for assignment. The men teachers are facing a more serious condition than the women. Approximately eight women are appointed to every man, whereas there are 426 men and 1,971 women on the waiting list. At the rate of additions to the list and assignments, the men will have to wait almost three years before being appointed.

The oversupply of teachers has had the effect of reducing the number of students preparing to teach. At the opening of the present term, there were 1,103 fewer students in the city's three training schools than a year ago, the total registration being 5,258.

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IT may now almost be said that man is "burning daylight." Darkness—feared by primeval man has today been completely conquered. The torch, the candle, the oil lamp, the gas burner, the electric bulb, the ordinary lighting globe, and now Celestialite have each marked successive stages in man's struggle

to conquer darkness. Another great stride forward has been taken in man's efforts to imitate the absolutely perfect light of the Sun.

Celestialite is made to transmit a light which is a very pleasing imitation of daylight.

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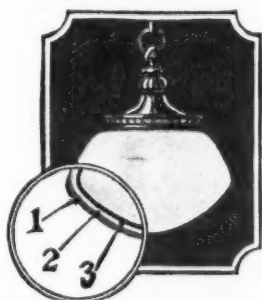
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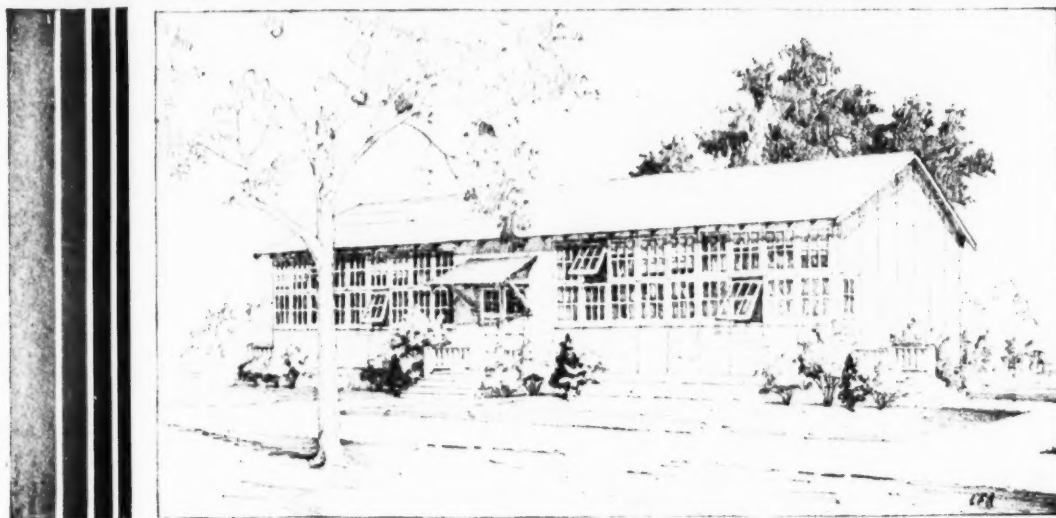
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CIRCLE A BUILDINGS

... Portable ...

VALUE OF THE VISUAL METHOD IN EDUCATION

“Mechanical invention of the twentieth century not only brings learning, but it brings it in a way that we can easily digest. This must be so for a generation which literally runs while it reads. That explains why we must make use of the new means—the radio and motion pictures—to improve our minds, as well as merely to entertain us.”

Mr. J. H. McNabb, president of the Bell & Howell Company, of Chicago, used this significant statement recently as the text for a short radio talk on “Visual Methods in Education.” In the course of the talk, he traced the progress of visual education in the last twenty years, and showed how it has been adapted to the teaching of civics, geography, history, art, and many other forms of educational work. Mr. McNabb spoke in part, as follows:

“Many of us can remember the early days of the nickel show, our first acquaintance with motion pictures back in the days when entertainment was the main object of their being. It wasn’t long before the five-cent movie cost us thirty cents, because it had become an article worth thirty cents. When all the attractions of marble halls and splendid orchestras were added to the plan, the public gladly paid the price of glamor, and still thought of movies only as an entertainment.

“In modern industry it has been found that the small projector and movie film are important as adjuncts in making a living story that will sell the goods. And so does modern education find it the best way to “sell the goods” to growing minds. This is the real reason for the educational success of motion pictures. Recently educators have added motion pictures to their curricula, and they have thrown open their schools for experimental and research work, to determine the value of motion pictures compared with oral-instruction methods. And what that may mean to children of the future.

“Do we realize the marvelous use for movies in the home? Fathers and mothers, as well as school teachers, can appreciate the simplicity of such equipment—a compact projecting machine, which removed from its case, can be attached to a light socket, and with a few simple motions of threading the film, can enjoy the thrill of homemade movies. Such is the vision opening to us, now that motion pictures have been made the property of schools and homes, as well as of entertainment houses.”

STANDARDS FOR COMPOSITION BLACKBOARDS

The Bureau of Standards of the U. S. Department of Commerce has adopted revised standards for composition blackboard as agreed upon by the manufacturers, wholesalers, and users of composition blackboards. The list of stock items is as follows:

Table I. Cement Asbestos Backing

Type 1		
Color	Widths feet	Lengths feet
Black	3½—4	6, 7, and 8

Table II. Wood-Pulp Backing

Type 2		
Color	Widths feet	Lengths feet
Black	3½—4	6, 7, 8, 10 and 12
Green	3½—4	6, 7, 8, 10 and 12

Obsolescent

All	3½	6, 7, 8, 10 and 12
-----	----	--------------------

Table III. Gypsum Core Backing

Type 3		
Color	Widths feet	Lengths feet
Black	3½—4	6, 7, and 8
Black	3½	6, 7, and 8
Green	3½	6, 7, and 8

Obsolescent

“The present volume in green board is sufficiently large to warrant its retention. The volume of demand at the time of the next revision of the recommendation will determine subsequent action.

“The present volume in the 3-ft. width is sufficiently large to warrant its retention. The volume of demand at the time of the next revision of the recommendation will determine subsequent action.

SCHOOL TRANSPORTATION PROVIDED IN FORTY-SIX STATES

Statutory provisions for the transportation of school children, governing expenditures of between 25 and 30 millions for 1929, are found in the codes of 46 states of the Union, according to a recent report of Prof. John Guy Fowlkes, of the University of Wisconsin, in the Nation’s Schools.

The estimated amount spent for transportation in 1917-18 was 10 million, according to Professor Fowlkes. In the next year, the amount jumped to 16½ million, and the year following, it reached 25 million. It is estimated that the amount spent in 1930 will be greatly in excess of 30 million.

The report shows that school transportation is mandatory for certain distances or for certain classes of pupils in 21 states. In 16 states, the statutes provide that the people themselves shall decide, in certain types of districts, whether or not transportation shall be offered. There is a tendency for the statutes to impose rather stringent restrictions on the drivers of school conveyances. A total

of 28 states have adopted rules governing the drivers of school busses. Seven states, including Wisconsin, require that the driver be experienced, of good moral character, and able to maintain discipline and order in the conveyances.

A COMPARATIVE TABULATION OF BUDGETARY EXPENDITURES AT ROCKFORD, ILL.

The board of education at Rockford, Illinois, uses two simple tabulations for the study of its budget totals. One of these tabulations indicates all the possible resources and disbursements according to funds. In parallel columns, the current year and the coming year are shown, and in a third column, the variations are stated.

A second comparative statement is prepared, showing the actual amounts necessary for budgetary expenditures and indicating the percentages and the ideal disbursements. The form for the year 1929 is as follows:

Division	Amounts		Percent Suggested Distribution	
	1928	1929	1928	1929
Administration....	\$ 38,639.58	\$ 42,096.34	3.2	3.5
Instruction.....	868,736.49	862,531.50	73.7	72.3
Operation ..	158,707.19	177,150.15	13.5	14.9
Maintenance....	59,153.30	52,996.75	5.3	4.5
Coordinate Activities	18,420.35	18,173.01	1.5	1.5
Auxiliary Agencies..	4,089.00	6,524.06	.3	.5
Fixed Charges ..	27,510.70	33,170.93	2.5	2.8
	\$1,175,256.67	\$1,192,642.74	100.0	100.0

SCHOOLS INSTALL RADIO SETS

—Avon Lake, Ohio. A complete radio receiving equipment has recently been installed in the Avon Lake centralized school. The installation was authorized by the village board of education and will permit radio programs of an educational nature in each room of the school. Such programs as the state educational department program from Columbus, speeches of the country’s statesmen, and other educational programs will be received for the benefit of the students and teaching staff.

The Avon Lake school system is administered by a board of education of five members, consisting of Mrs. F. J. Martin, president; Mr. Oscar Kubach, vice-president; Mr. H. R. Siefried, Mrs. R. H. Fay, and Mr. Otto Katterhenry.



RADIOLAS "18" and "60" for the classroom

Product of RCA, General Electric and Westinghouse, the RCA Radiola is recognized as the finest achievement in radio instruments.

The "18" and "60" models are recommended for school use, because of their technical superiority as well as adaptability to classroom requirements.

RCA also has devised Centralized Radio Equipment, making possible the operation of any number of loudspeakers in different rooms by a single receiver, or any number of receivers from a single antenna. Complete information regarding this may be had by writing the Radio Corporation of America.

RCA RADIOLA 60—The super-selective, super-sensitive Super-Heterodyne, finest achievement in radio. For A. C. operation. \$147 (less Radiotrons).

RCA LOUDSPEAKER 100A—Sturdily-built, beautifully-toned reproducer to use with the "18" or "60" Radiola. \$29.

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Conducted by Walter Damrosch every Friday morning at 11 o'clock (Eastern Standard Time) until May 10 through the following stations:

WJZ New York	KDKA Pittsburgh
WBZA Boston	WLW Cincinnati
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WRV Richmond	KSTP Minneapolis
WRC Washington (11:30 to 12)	KVOO Tulsa
WHAM Rochester	WFAA Dallas
WOAI San Antonio	KPRG Houston
WSMB New Orleans	WJAX Jacksonville
WHAS Louisville	WHO Des Moines
WMC Memphis	WDAF Kansas City
WSB Atlanta	WOW Omaha
WBT Charlotte	WJR Detroit
KOA Denver	KYW Chicago

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Modern Schools Use Novel Method to Interest EVERY Child in *Musical Training*

TO engender not only an interest in music but a real enthusiasm for it on the part of every boy and girl, modern schools have found nothing more effectual than the novel method of introducing the harmonica into the regular musical curriculum.

So quickly and so easily can the average youngster master the harmonica to the point of playing with accuracy and expression that without consciousness of it, they rapidly acquire a thorough grounding in the fundamentals of music. They become excellent sight readers and as their ability increases, they soon become inspired with a keen desire for greater skill and achievement.

Step by step, then, so strong is the fascination of the harmonica that it is an easy matter to guide them into an appreciation of the best in music—

Effortless Training —Superior Results

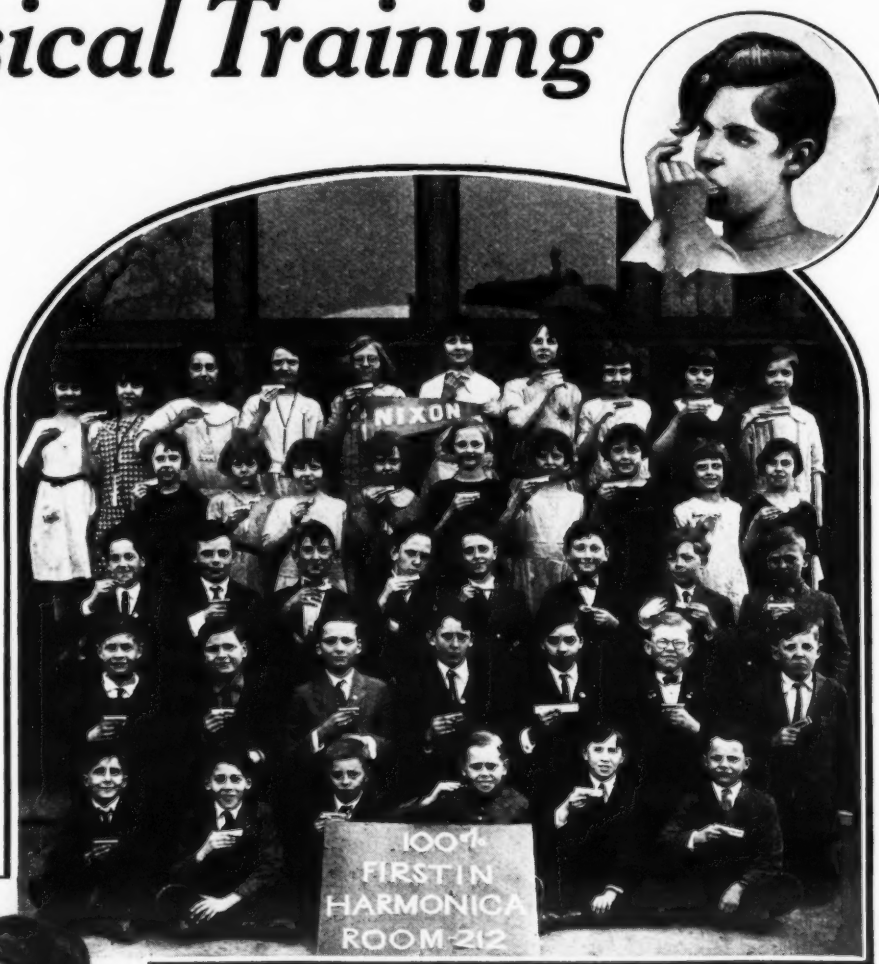
The value of the harmonica lies, not alone, however, in arousing an active interest for music on the part of the pupil. From the teacher's viewpoint it is likewise most effective. It minimizes to an immeasurable extent the endeavor, effort and time usually expended in musical training—and at the same time achieves results far beyond the usual.

Few, indeed, are the pupils, no matter how backward and listless they ordinarily have been in the study of music, who are not led into a real love for it through the lure of the harmonica.

Regardless of the ability of the student to "carry a tune" the use of the harmonica indelibly registers on his mind, tones which are absolutely true and thus steadily trains him to correct musical preception.

Instead of the music of the street they learn early in life to love the masterpieces of famous composers—classic and modern—and with this interest aroused, it is but a step to the study of the biography of these composers and the history of their times.

Most important of all, the desirable mental traits and characteristics developed thru playing this instrument almost invariably extend to the pupils' other studies and activities—and have a decidedly favorable influence on the general upbuilding and formation of his character. Indeed, so pervasive is its influence that it makes school attractive even to the unruly child and the retarded pupil.



Nixon School pupils have formed a real orchestra out of their harmonica players

Practical Helps for Teachers

So many teachers and music supervisors have inquired regarding the value of the harmonica in group as well as individual instruction that an exhaustive study of results in many schools have been prepared in the form of a brochure entitled "The Harmonica as an Important Factor in the Modern Education of Girls and Boys." To teachers and others in authority this brochure will be sent without charge upon request.

Illustrated instruction books, four-part harmony charts and individual "part" cards for each pupil are also available gratis. With the aid of this material, teachers and music supervisors in hundreds of schools have found harmonica instruction simple and results gratifying.



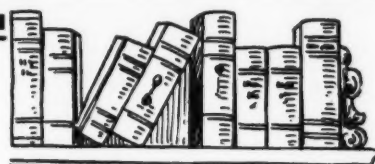
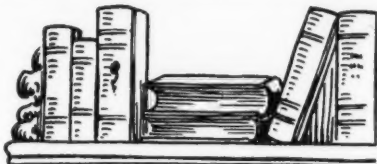
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Gentlemen:

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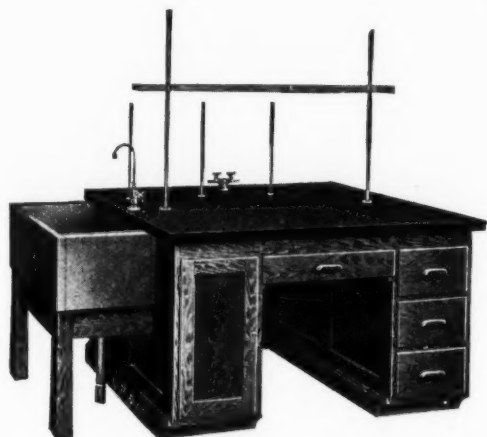
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The Tenure of Oklahoma Public-School Administrators¹

Herbert Patterson, Dean of the School of Education, Oklahoma Agricultural and Mechanical College, Stillwater, Okla.

The data for this study were secured directly from the issues of the Oklahoma Educational Directory, published annually by the Oklahoma State Department of Education. Each year this directory gives the names of the superintendents and high-school principals of the schools where as many as four teachers are employed.

By bringing into comparison the information given in two successive directories, it was possible to discover which administrators were working during any given year in the same communities in which they worked the previous year. A series of such comparisons reveals the information given in the following table:

TABLE I. Oklahoma School Administrators Returning to Community Served the Preceding Year

Year of Return	Superintendents and Principals	Who Returned	Per Cent Returned
1917.....	580	237	40
1918.....	205	104	50
1919.....	203	103	50
1920.....	736	328	44
1921.....	895	412	46
1922.....	1020	468	45
1923.....	956	438	45
1924.....	971	568	58
1925.....	2083	523	53
1926.....	983	503	57
1927.....	1052	634	60
1928.....	1098	661	60

In 1918 and in 1919 the number of cases is relatively small, due to the fact that the directory for those years included the names of superintendents only. For all the other years, the names of many high-school principals as well as superintendents were included.

Whenever a principal was promoted to a superintendency, he was tabulated as returning to

the same community, even though his work as a superintendent would not be identical with his previous work as high-school principal.

Two significant facts are evident from a study of Table I. The first is the great amount of mobility among public-school administrators in Oklahoma. If totals be taken for the entire series of tabulation, it is found that during the 11 years from 1917 to 1927 inclusive, only 4,378 out of 8,584 returned to the same communities for a second year. This means that each fall found 51 per cent of the superintendents and principals in the same communities they were serving the previous year. In other words, 49 per cent were in new communities doing new work.

The second significant fact is that there appears to be a gradual increase in the tenure of Oklahoma school administrators. While in 1917 only 40 per cent of the superintendents and principals returned to the same communities in which they served the preceding year, in 1927 a total of 60 per cent returned.

From the figures covering the past decade it is evident that in many communities in Oklahoma the changing of the superintendent is almost, if not quite, an annual event. It is indeed difficult to predict for such communities any very steady improvement in the schools. Often the platform of the incoming administration is the reversal of the policies of the outgoing administration. This constant change of policies over a series of years is one of the most disturbing features of public-school education in Oklahoma. It is encouraging to note that conditions are improving.

SUPPLIES FOR A ONE-TEACHER SCHOOL

"Just as the farmer of today would be seriously handicapped by having on his farm only the tools, machinery, and means of transportation which the farmer of 50 years ago found adequate for farming, so many teachers in our rural schools in the south today are handicapped because they are supplied only with a type of equipment which had to serve 50 years ago, when it was possibly the best available. A carpenter could with only a hatchet and a saw build a house, but he would waste a great deal of time and energy and a very crudely constructed building would be the result."

So writes J. W. Oxford of New Orleans, La., in discussing school supplies for rural schools. He points out that pupils are frequently retarded in their classroom labors because of a lack of material to keep them properly employed. He suggests a list of items for a one-room school, aside from students' desks, as follows:

- | | |
|--|---|
| 1 Jacketed heater | 1 Map of U. S. |
| 150 Sq. ft. blackboard | 1 Map of world |
| 12 Blackboard erasers | 1 State map showing counties |
| 1 Sanitary drinking fountain | 1 Hectograph |
| 1 Water pail | 1 Printing outfit |
| 6 Inexpensive wash-basins | 1 Hand bell |
| 1 Mirror | 1 Clock |
| 2 Floor brushes | 1 Bulletin board |
| 1 Dustpan and brush | 1 First-aid case |
| 1 Oil mop | 1 Phonograph and records |
| 5 Gallons floor oil | 1 Piano (if possible) |
| 1 Teacher's desk | 2 or 3 Good pictures |
| 1 Teacher's chair | 1 Unabridged dictionary and stand |
| 1 Wastebasket | 6 Compasses |
| 1 Pencil sharpener | 1 Box colored crayons |
| 2 Visitors' chairs | Adjustable shades |
| 1 Kindergarten table with chairs | Paper toweling |
| 1 Library table and chairs | Measures (½ pint, pint, quart, gallon, peck, bushel) |
| 1 Bookcase | United States Flag |
| 1 Lot well-selected library books, including supplementary readers | Playground apparatus |
| 1 Thermometer | Hot-lunch equipment (if possible) |
| 1 Globe | yardsticks, modelling clay, phonic builders, sentence builders, number builders, picture and word matchers, sheets of cardboard |

"When boards of education do not purchase adequate equipment," Mr. Oxford adds, "it may be because they do not know what to buy or where to buy, and rural teachers are not always in a position to intelligently help them."

¹Abstract of a paper read at the Seventeenth Annual Meeting of the Oklahoma Academy of Science, Stillwater, November 30, 1928.

Filing Equipment and Indexing for County Superintendents' Offices¹

Fallen Campbell, Director of the State Textbook Division, Frankfort, Ky.

For several years the county superintendents of Kentucky have felt the need for some definite information on office files and indexing. This paper presents a discussion of the subject, based upon a research report initiated by the Blue Grass Executive Club of Lexington, Ky. It is expected to be beneficial for county superintendents now in office and for students preparing for a county superintendency. It suggests many elements of record keeping of interest to superintendents and school boards in smaller communities.

No attempt is made here to show county superintendents or office employees how to organize, systematize, and properly operate the general routine of the office; but, an effort is made to list the minimum file drawers and boxes with proper index guides and other auxiliary equipment fundamental in standard office practice. In making recommendations on a subject of this kind, it is necessary to use commercial terms that seem more or less unfamiliar even to many people with years of office experience in the use of this equipment. Standard terms have been used, avoiding mention, however, of specific brands and trade-names held by individual companies or supply houses.

The report is by no means original. It represents many ideas from county superintendents who have ample filing equipment and efficient office systems; assistance and cooperation have been received from the state department of education at Frankfort; and suggestions have come from representatives of filing equipment and supply companies. The kind assistance and many courtesies received in the preparation of this material are greatly appreciated.

Inadequate Files

The state of Kentucky a few years ago made an educational survey of her school system, and the commission's report said in part: "The offices of many (county superintendents) are inadequately and poorly furnished, few have ample filing cases. At that time not more than four or five had modern clerical and statistical devices. The report further showed that at the time the survey was made, two thirds of the superintendents in Kentucky were without clerical assistance of any kind.

From the figures compiled by Mr. O. F. Galloway, and published in the Kentucky High-School Quarterly, in April 1925, it is clear that, at that time, 44-1/3 per cent of the county superintendents had office help, and 24 per cent of the superintendents had full-time clerical help. Mr. Galloway's study further shows that clerical work occupied an average of 35 per cent of the time of the 113 county superintendents. One superintendent spent 74 per cent of his time in clerical duties, and 22 superintendents reported that they devoted more than 50 per cent of their time to this kind of work.

This study shows that superintendents are awake to the importance of clerical help and the need for proper office equipment. However, very few do have modern filing equipment, or follow standard principles in filing.

Source of Information

Most of the information regarding office practices and filing equipment was secured as follows: (1) by visits to more than 40 county superintendents' offices, studying office practices and filing equipment; (2) from 106 responses to a questionnaire mailed to all county superintendents; (3) from a study of the various office forms used by 20 or more county superintendents in conducting school programs, in addition to those required by the state board of education; (4) from information reported by auditors and inspectors to the superintendent of public instruction; (5) from the commission's report of the Kentucky survey made in 1922; (6) from the thesis of Mr. O. F. Galloway, published in 1925.

According to the 106 responses to the questionnaire, 56 per cent of the county superintendents have office help, and 31 per cent have full-time clerical help. The information further shows that 73 per cent of the superintendents are not satisfied with their office systems and would be willing to make changes. Thirty-two counties of the 106 reporting employ annually some extra help to audit their books, which is another method of securing office help.

County boards of education employ superintendents as professional executives. And certainly no argument is required to prove that it is very poor economy to ask them or even permit them to do office routine, such as writing letters, checking and filing reports, opening mail, keeping books and accounts, writing the payrolls, indexing, preparing and mailing out examination questions, scoring

tests, compiling statistics, and answering hundreds of questions—all of which an office clerk might just as well handle without the help of the superintendent.

Individuals who are responsible for the management and conduct of office work, and who have not made some study of other office systems with a view of greater efficiency, may not know that any methods better than their own exist. Clerical workers who are satisfied that their offices are absolutely perfect in system, and their methods of office practice and procedure are perfect will not take time to study other systems. It is natural for a person like this to say that he knows his own work better than anyone else and can better organize it, but this is not always true. For example, a person may know exactly his physical trouble, but he still needs a doctor to correct an ill. We cannot always diagnose our own case, but even if we do, we can rarely prescribe the remedy. So it is with office workers; one may need a survey of his office and a remedy prescribed.

Bases for Recommendations

The amount of filing space and the sets of guides for indexing any county superintendent's office will, in a measure, depend upon: (1) the number of teaching positions; (2) the administrative personnel; (3) the number of pupils enrolled; (4) the program of schoolwork; (5) the plan of conducting the program. The most recent statistics available show that there is an average of 62 sub-districts in each county in Kentucky; the average number of pupils in each county is 3,000; and there are approximately 50 children in each sub-district. The foregoing facts are kept in mind in making recommendations.

It is very important for a superintendent to know the kind of equipment to purchase, and the minimum necessary for his individual need. There is quite as much danger of wasting money by over-equipping an office as there is of money and time wasting by allowing an office to remain inadequately furnished.

Filing cases and furniture are not bought to add to the appearance of an office. The only reason for buying any item is to increase the efficiency of the superintendent and his assistants in operating the business of the school system. There are lots of old file boxes, pigeonholes, bookshelves, letter presses, and antiquated accumulations of all kinds in many offices. Most of these articles are not worth the wall and floor space they occupy, and could be discarded without any loss whatsoever. In fact, most of such articles should make way for equipment actually needed for better office efficiency.

The installation of a filing system is a puzzling problem to most county superintendents, who have

had little or no office training with standard filing equipment. They need not criticisms and generalized suggestions for systematizing and indexing the records in their offices. The important thing for them to know is definitely what kind of files to buy, the exact type of guides and indexes to insert in each file, what purpose each separate file drawer serves, how to use it, and what specific type of equipment is best suited for their needs.

An office is properly indexed or systematized when every item, paper, document, or record, including the miscellaneous desk tools and office supplies can be referred to without any loss of time. This being true, desks, storage cupboards, vaults, safes, etc., are necessarily considered to be part of the filing equipment. File drawers may be used in desks, in fireproof safes, or in vertical or horizontal file sections, the number and kind depending upon the total amount of records and the wall and floor space of the office.

I. The Secretary's File

Where the superintendent's office assistant does both stenographic and secretarial work, she should be furnished a typewriter desk with one deep drawer in the right pedestal. This drawer should be fitted on roller-bearing slides, which permit the full extension and easy action when the drawer is pulled out and returned.

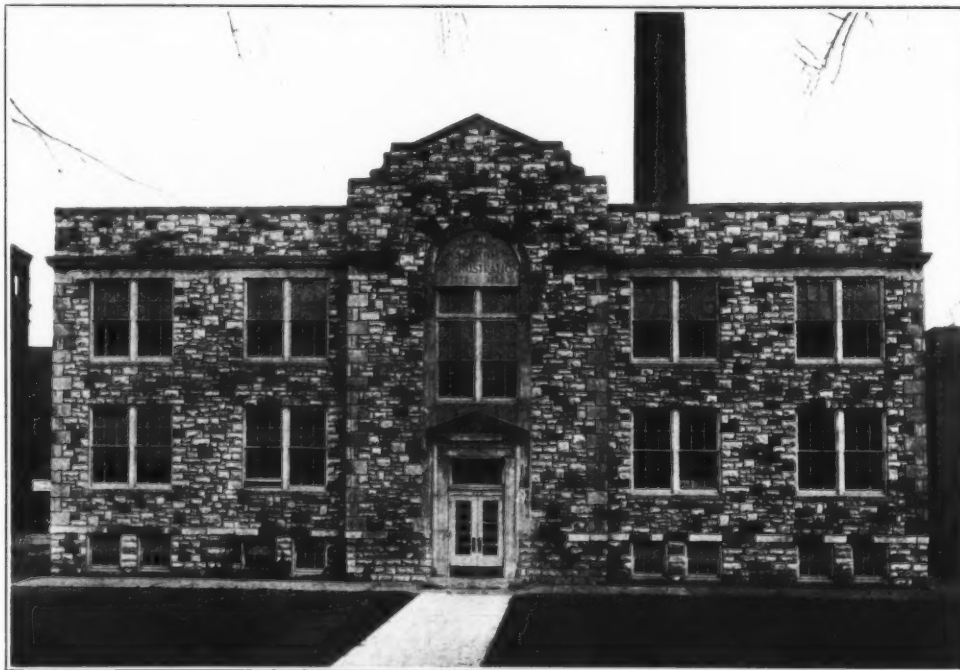
Alphabetical Guides. This drawer should be fitted with two sets of alphabetical guides, angular tabs; lettered A to Z; 25 divisions; letter size. The tabs for the guides may be metal or celluloid, in the first and second positions only. The body of the guides should be medium-weight pressboard.

Folders. With each set of guides used in this file, there is an alphabetical set of folders, cut for the center, or third, position, with the same number of divisions as the guides. These folders are of a different color from the tabs of the guides. They are used for miscellaneous filing. In addition to the colored folders, there are used in this file manila medium-weight folders, body 9 1/2 in. by 11 1/2 in., with 1/2-in. tabs for individual names, numbers, or labels. These are cut 3/5 right-hand position.

Use of File. One set of these guides and folders is used by the secretary as a file for papers, small supply-blank forms, and unfinished business, and other items depending upon the work of the person using it. The second set of guides is used as a temporary file, for finished business, which is referred to occasionally before transferring such matters to the general correspondence files described later. This file saves the secretary much time in going to the general files for information that is here at her finger tips.

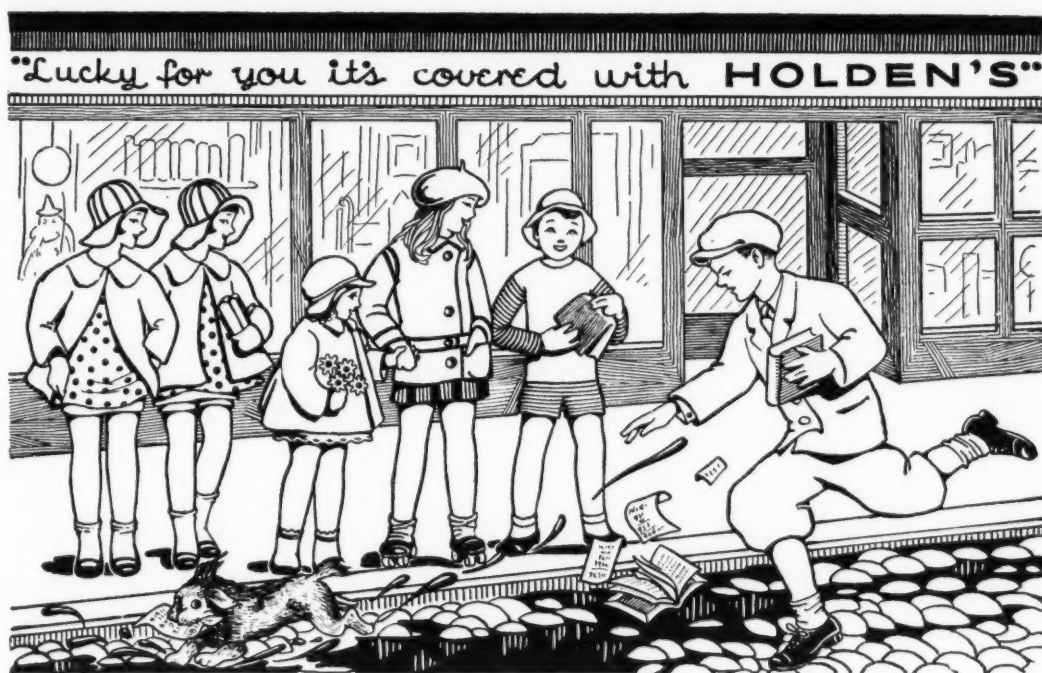
File pockets or jackets, with expanding sides, the same dimension as the plain manila folders, except for the range of expansion in thickness, may be used for this file. The number for each set of such guides depends upon the individual needs of the office.

(Continued on Page 98)



NEW ADMINISTRATION BUILDING OF THE BOARD OF EDUCATION, MASON CITY, IOWA

The executive offices and the board of education of Mason City, Iowa, are housed comfortably in a new building erected on the site of the old Central school building, one of the original structures of the school system. The new building contains the offices of the superintendent of schools, of the secretary of the board of education, of the several supervisors of special subjects, of the school nurse, and of the school supplies and repair departments. The basement contains three storage rooms for books, equipment and supplies, a small repair shop, and a large fireproof vault for the records of the superintendent and of the secretary. The first floor contains the several administrative offices and the second floor is at present unassigned, but is intended for future growth. It is likely that classrooms will be arranged until the administrative department requires further space. The building cost \$52,000, a low figure due to the fact that it was possible to make use of the foundation of the old structure.



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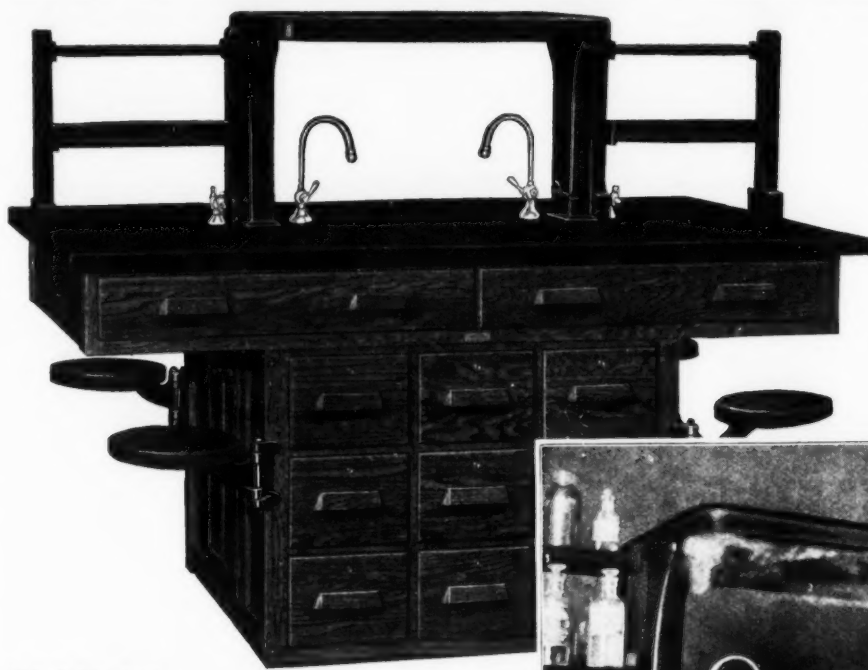


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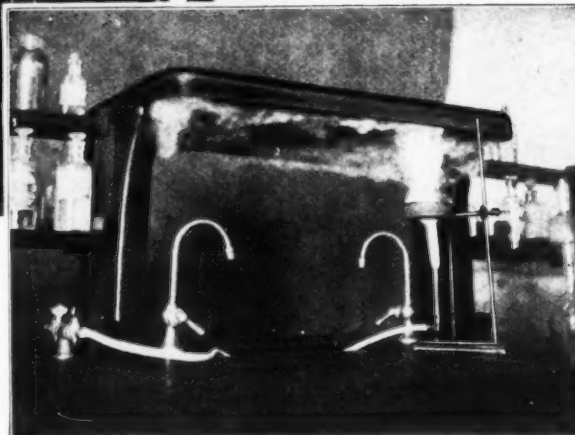


**CLOSE-UP
OF HOOD IN ACTION**

This unretouched photograph shows the action of the Sheldon hood in removing smoke or fumes. The arrangement is such that a curtain or baffle of swiftly moving air is formed around the perimeter of the hood. The air curtain cuts off the escape of fumes that are formed beneath the hood and carries them through a narrow opening into the exhaust duct. The hood normally removes approximately 200 cubic feet of air per minute. Shuttered openings are provided where the two exhaust ducts pass through the table for the removal of gases heavier than air.

The air in your chemistry laboratory can be as pure as that in a classroom. There need be no more crowding around wall hoods; no more careless experimenting; no more filling of the rooms with noxious fumes. The health and efficiency of students and instructors need no longer be jeopardized by old fashioned methods of fume removal.

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Sheldon chemistry tables are correctly designed, durably constructed and attractively finished. And right on the tables you may have the handy Sheldon Patented Table Fume Hoods, the latest scientific equipment for removing fumes. They are ready at the press of a button to instantly remove the fumes generated by the experiments of a class of twenty-four students or more.

Long-life furniture, modern fume removal, this is what you get when you install Sheldon laboratory equipment. A Sheldon Equipment Engineer will be glad to call and give you details. Write us today.

E. H. SHELDON & COMPANY, MUSKEGON, MICHIGAN
LABORATORY FURNITURE SPECIALISTS FOR 30 YEARS

(Continued from Page 96)

II. Subdistrict-Schools and Consolidated-Schools File

File Drawer No. II is a vertical file, standard letter size, 24 in. deep, and built on roller-bearing slides.

Numerical Guides. The guides for this file are metal tab; flat; cut one fifth; medium pressboard body; numbered with arithmetical symbols, alternating first and second positions, as: 1, 10, 20, 30, etc., reading from the front of the drawer toward the back, until all the numbers of the subdistricts in the county are included. In other words, the county represents 65 subdistricts, the guides are numbered in tens from 1 to 70.

Guides Labeled. Immediately behind the numerical guides are blank metal tab guides, cut one third, arranged in the first two positions with the names of all the consolidated white schools written on the inserts. Immediately behind the guides used for white consolidated and high schools are other blank guides, the same dimensions as those used for white consolidated schools. Inserts for these tabs are labeled with letters to indicate the colored schools. The inserts for the subdistrict white schools, as shown in the label space, are on white paper; those for the consolidated schools on buff, and the colored schools are labeled on salmon.

Folders—Subdistricts. Heavy manila folders are used in this file, one folder for each subdistrict exactly the same size as the manila folders described for file No. I, except that the tab is cut one half right instead of three fifths, and scored to expand three eighths of an inch. The folders are labeled with the numbers of each subdistrict and the name, as: 1—Red House, 2—Big Rock, 3—Jett's Creek, etc., until all the subdistricts are labeled by number and name. The first nine folders which are numbered consecutively, are dropped in the file drawer between the numerical guides one and ten. The next ten folders, numbered from 10 to 20 inclusive, are between numerical guides 10 and 20, and so on, running consecutively with ten folders behind each guide, until a folder is used for each subdistrict in the county.

Folders—White Consolidated. One file pocket or jacket is used for each consolidated white school, size 9½ in. by 11½ in., with one half-inch tab, cut one third right. The folder or pocket is labeled with the name or the school corresponding with the guide which it is dropped behind.

Folders—Colored Consolidated. The same type of folder is used for the colored consolidated schools as for the white schools.

Folders—Small Colored Schools. The same kind of folder is used for the small colored schools as for the subdistrict white schools, except that the tabs are cut one third right-hand position.

The Use of the File. In this file, up-to-date information is kept concerning each consolidated or subdistrict school for both colored and white children. In the folders information like the following is kept: (1) the physical condition of the buildings, grounds, and equipment; (2) a scale plat of the school grounds; (3) a floor plan of the building; (4) the building specifications, including the exact sizes of the windows, doors, etc.; (5) an annual inventory of supplies; (6) a map of the subdistrict, showing the residences, roads, and centers; (7) a record describing the boundary of the district; (8) a current census roll; (9) photographs of the buildings, grounds, and students year after year; (10) parent-teacher or other organization rolls; (11) age-grade-and-progress reports; (12) a temporary organization roll; (13) a local financial report; (14) a memorandum of requisitions for supplies; (15) district surveys; (16) the deed for the district property; (17) the insurance policies in force; (18) the details of textbook transactions; and (19) such other information as the board of education and the superintendent may desire.

Separate folders should be used for the different subjects and each folder should be labeled to explain its contents. The various folders are placed in alphabetical order behind the subdistrict or school guide, as shown by the label on the guide.

Tallent, Robert W.				
Jackson, Kentucky				
Order No.	Dated	Book No.	Page	Applies to
400	4-13-27	XI	38	Employed Supervisor
445	7-1-27	XI	43	Claim No. 730
460	8-1-27	XI	47	Claim No. 760
475	8-1-28	XI	47	Resignation

SUGGESTED FORM FOR PERSONNEL RECORD

III. The Personnel File

File Drawer No. III is a vertical file, letter size, 24 in. deep, set on roller-bearing slides.

Alphabetical Guides. The guides for this file are medium pressboard body, with 50 subdivisions, lettered A to Z, and numbered consecutively, letter size, with tabs cut one fifth in the first and second positions.

Folders. There is in this file for each teacher in the school system a plain heavy-weight manila folder, body 9½ by 11½ in. with ½-in. tab, cut 3/5 right position.

Use of the File. The name and address of each teacher or other employee, in the county system is written on a folder and filed behind the guide that corresponds to his surname, in strictly alphabetical order. This is revised up-to-date for each current school year. In these folders the superintendent keeps such information concerning the personnel of the system as he desires. For example, a personal data form on heavy paper, 8½ by 11 in., has recorded on it the name of the teacher, permanent address, date of birth, physical record, academic and professional training, experience record, service record, certificate record, etc. Such information as the teacher's rating, annual contract, testimonials, portrait, or any other facts that are considered valuable in operating the schools successfully, may be kept in the individuals' folder or folders. In revising the file each year, folders for the people who are not teaching or have quit the profession are removed from the current file to a transfer file provided for that purpose. The folder for each employee should be kept at least ten years after he leaves the school system.

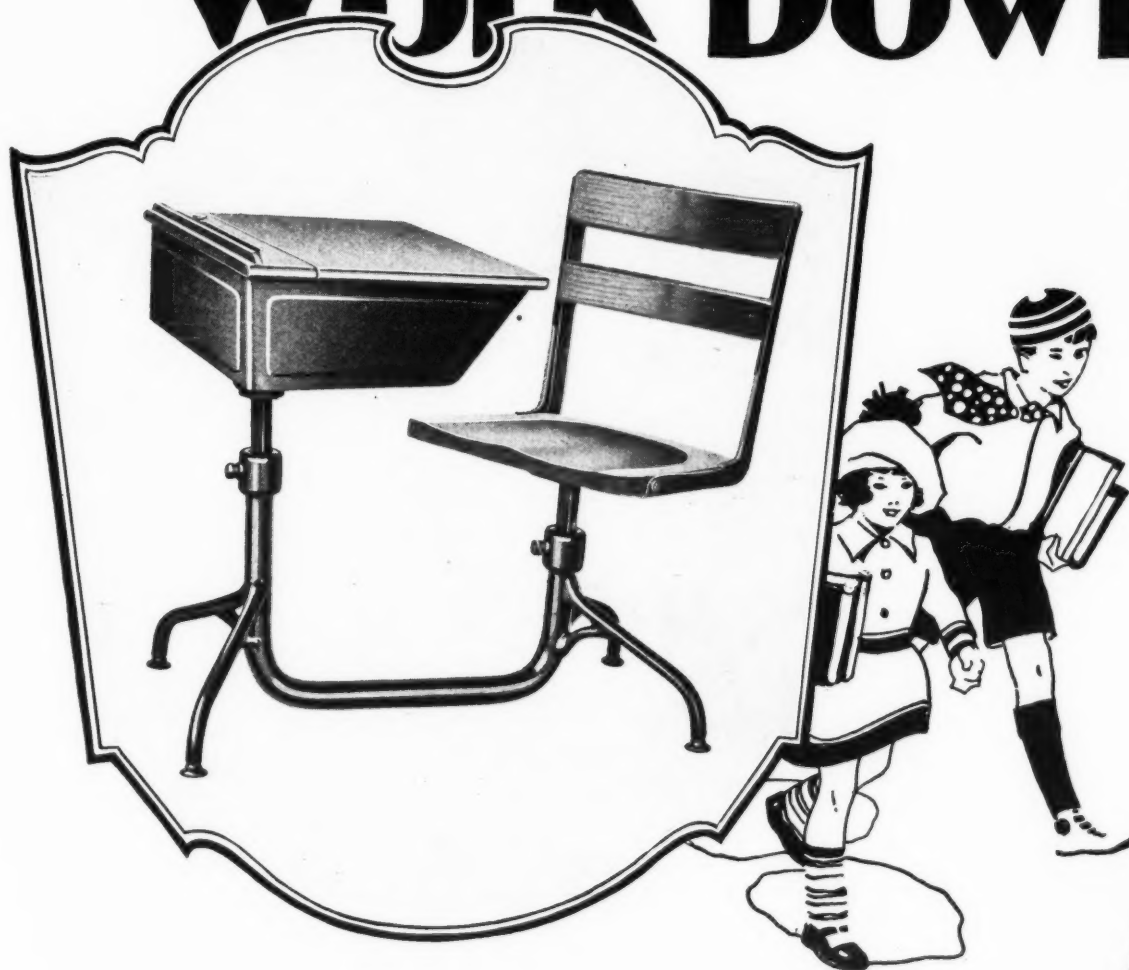
IV. The Expenditure File

File Drawer No. IV is a vertical file, standard mercantile-report size, inside dimensions 7 in. high, 8½ in. wide and 24 in. deep, and built on roller-bearing slides.

Numerical Guides. This file is equipped with blank, flat-metal-tab guides, cut one third, alternating in the first two positions. The number of guides necessary for this file drawer will depend upon how many checks are issued each year. The blank tabs are labeled with numerical symbols inserted in the exposed label space, in hundreds, as: 100, 200, 300, etc., 1000, 1100, 1200, etc. The numbers on the inserts will depend upon how high the consecutive check numbers run. There is a guide for every 100

(Continued on Page 100)

The Adjustment won't Work Down!



UNIT MOVABLE DESK SET

HERE is a modern, practical school desk that assures easy, rigid, and positive adjustment. Unlike any other style, the desk and chair supports are wedge shaped. They do not depend on bolts and nuts and, therefore, cannot work down even if the adjustment studs are only partially tightened. . . . On other types of adjustable desks, one must strain and struggle to tighten the bolts to a point where they "bind" against the supports. Such an adjustment, depending on hand-created pressure alone, cannot have the security or permanence of this Heywood-Wakefield wedge-type of adjustment. . . . This desk has many other advantages, too, that experienced school buyers will appreciate. The under structure is built of heavy gauge steel tubing; the desk box is attractive and roomy; and the swivel-type chair has a deep seat and a posture back. . . . Write to the nearest Heywood-Wakefield sales office for detailed information on this and other modern school desks.

Send for our new
School Furniture
Catalogue 103-S

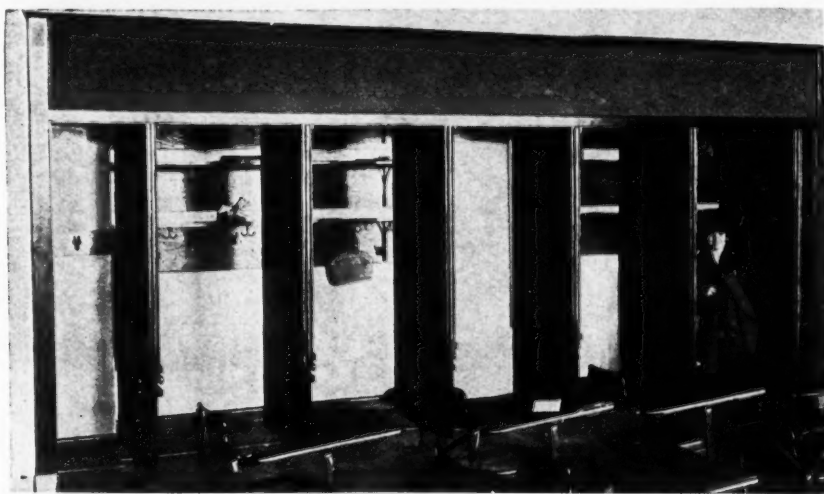
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HEYWOOD-WAKEFIELD

MAKERS OF PRACTICAL SCHOOL SEATING

"It isn't Right, to Tempt Them"



How often we have heard this said about leaving money laying around carelessly . . . about displaying costly jewelry unnecessarily. Yet in the school rooms not equipped with a safe method of taking care of books and wraps, we tempt little boys and girls in the most formative period of their lives! There is a constant temptation before them in those unlocked doors . . . those pretty clothes and nick nacks, that they can't resist. Stealing from the open cloakroom is so easy that even small children carry on this petty pilfering and turn into "Baby Bandits".

The MILLER SCHOOL WARDROBE will stop them!

How much easier to prevent . . . than to discipline afterward. The Miller School Wardrobe will absolutely prevent stealing . . . for there is only one key to the Miller Wardrobe doors . . . and the teacher holds that key. When she wishes, she can unlock the entire set of doors, or a single door, with one simple movement. This is the famous single control Miller School Wardrobe. The most up-to-date schools in America are installing Miller School Wardrobes. Write today for catalog W-7 which gives complete information on these wardrobes.

123 W. Eighth
Street

K-M SUPPLY CO.

Kansas City
Missouri

(Continued from Page 98)

checks, whether numbered in hundreds or thousands.

Use of File. This file is used for all expenditure documents necessary to vouch for the payment of any money disbursed by the board of education. The documents filed to vouch for payment of money are: (1) requisitions for items purchased; (2) purchase orders for items bought; (3) itemized claims signed and verified by the recipients of the money paid out; (4) the cancelled checks properly indorsed; (5) monthly reports of teachers and the administrative personnel or other employees; (6) requisitions for labor.

All reports, requisitions, purchase orders, and claims are of uniform size, 5½ by 8½ in.

The expenditure documents for items purchased locally consist of: (a) original requisition; (b) purchase order; (c) itemized claim; (d) cancelled check.

The expenditure documents for teachers' salary consist of: (a) teacher's monthly report; (b) cancelled checks.

Expenditure documents for administrative personnel or other employees consist of: (a) monthly reports; (b) cancelled checks.

Expenditure documents for general labor consist of: (a) requisitions for labor; (b) verified claims; (c) cancelled checks.

When money is spent by the county board of education, the expenditure documents vouching for the payment of the money are fastened together and filed numerically in consecutive order, according to the number of the check and claim, or report, which are numbered to correspond. The county-board orders are numbered consecutively, and the order number that authorized the expenditure of money is written on the claim. (Note—The form of board orders and method of indexing them are described elsewhere.)

One hundred checks with other documents fastened together, vouching for the payment, are filed between guides, beginning at the front of the drawer and running toward the back.

One file drawer is used for current business and as many other similar file drawers with same indexing equipment are added, as are necessary to take care of the expenditure documents year after year.

V. The Correspondence File

File Drawer No. V is a vertical file, letter size, 24 in. deep and built on roller-bearing slides.

Alphabetical Guides. This drawer is equipped with one set of alphabetical guides, letter size, 50 subdivisions, lettered from A to Z, and numbered consecutively. The body of the guides is heavy pressboard; flat celluloid tabs; cut 1/5, alternating in the first and second positions.

Folders. There is a set of folders for this file, lettered and numbered exactly the same as the guides. They are cut 1/5 for the third position and are of a different color from the guide tabs. These folders make reference convenient when looking for letters. Miscellaneous correspondence is filed in the colored folders.

Individual Folders. Plain manila folders, cut 2/5 right-hand position are also used in this file. These folders are duplicates of the folders used in file drawer No. I. Where very much correspondence is carried on with any individual, an individual folder with the correspondent's name and address written on it, is used. In other instances it is better

THE MOVEMENT TOWARD SCIENTIFIC SALARY SCHEDULES

The major obstacle of scientific schedule-making is now found in the state laws that make equal pay for men and women mandatory. We will not achieve salary schedules which are economically and scientifically sound, until we learn to conduct salary campaigns on some basis other than demanding special privileges for our profession. Sentimental sob-stuff about noble, self-sacrificing service which we render, and the supposed fact that we in our profession are chosen of God, should have no place in an earnest consideration of the salaries which should be paid to the members of a respectable and self-respecting profession. Furthermore, it is our belief that the use of intimidation and of political pressure to secure salary increases, as these have been used by certain groups of teachers in New York and in other cities, have done more to demean our profession and to bring it into the contempt of sensible people than many years of devoted public service by thousands of good teachers can ever counter-balance.—James R. McGaughey.

for the subject about which the correspondence deals to be written on the folder. The folder is filed behind the guide corresponding to the surname, or subject. Many superintendents have individual folders in this file for each teacher and trustee in the system.

Use of the File. After letters received in the office are given attention, those necessary for future reference are filed in this drawer in strict alphabetical order. They are placed in the folders in chronological order according to the dates received, with the most recent letters in the front of the folders. A carbon copy of each personal letter sent out from the superintendent's office is filed alphabetically in this drawer behind the guides corresponding to the surname of the person to whom the letter is written, or the subject about which it was written, depending upon the nature of the correspondence. If the letter is an answer, the carbon copy is attached to the letter answered. Once a year, usually July 1, the contents of this file are removed to the transfer file, which is fitted with a set of guides, lettered and numbered to correspond with the current file, except that cheap manila-board guides may be used in the transfer cases.

In making periodical transfers, it has been found more economical and accurate to remove all the folders to the transfer files, and supply a new set of colored folders for the miscellaneous correspondence and add the individual folders when necessary. Some superintendents do not transfer the letters for two or three years, depending upon the amount of filing space in the correspondence file at the end of the year and the accumulated correspondence.

VI. Miscellaneous File

File Drawer No. VI is a vertical file, letter size, 24 in. deep and built on roller-bearing slides.

Alphabetical Guides. The guides for this file are medium pressboard body; letter size; flat metal tabs; cut 1/5 for first and second positions; lettered A to Z; 50 subdivisions and numbered consecutively.

Folders. Plain manila folders, heavy weight, body 9½ by 11½ in., with ½-in. tabs, scored to expand ¾ in., cut 3/5-right position are used in this file, the number depending upon the needs of the school system.

Use of File. This file drawer is used for filing miscellaneous papers that are not listed in any

(Concluded on Page 102)

ATWATER KENT

RADIO

What music is sweeter
to your ears

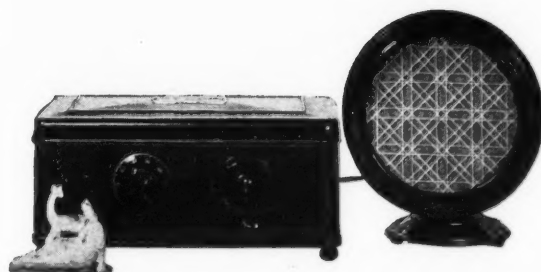
than the song of profits? Here is radio that fairly
sings out tunes to run up your profit scale . . .

Atwater Kent offers a tried and tested Electro-
Dynamic at a price most people can afford to
pay. Atwater Kent gives people radio programs
the way they want to hear them . . . And Atwater
Kent gives *you* sales . . . keeps a mighty profit
rhythm pulsating all the time . . . *Are you listening?*

ELECTRO- DYNAMIC

ATWATER KENT
ELECTRO-DYNAMIC
RADIO
IN CABINET
by Red Lion

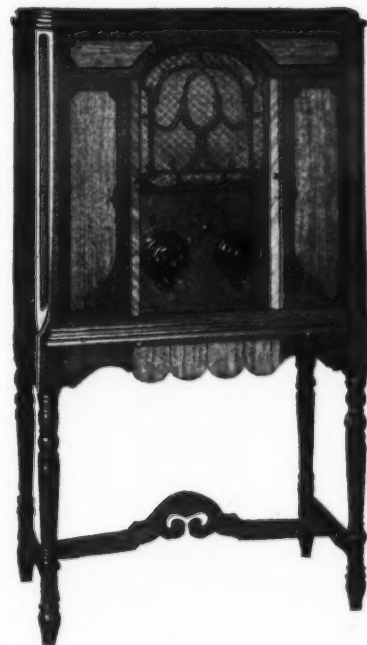
ATWATER KENT MANUFACTURING COMPANY
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MODEL 46. New Electro-Dynamic receiver for use with
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the same electrical characteristics. FULL-VISION Dial. Panelled
corners, ball feet. Requires 7 A. C. tubes (2 power tubes) and
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MODEL F-2. Electro-Dynamic speaker. True to the whole
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ATWATER KENT
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Atwater Kent Radio Hour—listen in.*

CATALOG "F" of laboratory furniture should be in the hands of every school executive. It will be sent promptly, prepaid, upon request.

In it you will find a complete line of laboratory furniture, giving in concise terms the exact construction of each piece.

The many illustrations will convey to you a clear idea of the completed furniture, as a large number of them are made from actual photographs



OUR SERVICE Department of trained engineers and designers is available, without charge or obligation, to school authorities, architects and builders for making layout plans for various laboratories.

Send us sketches of your proposed laboratories and we will make suggested layouts for you

WELCH Furniture Formerly the "Wiese" Line, Manufactured in our Factory at Manitowoc, Wisconsin

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1516 Orleans St., Chicago, U. S. A.

Representatives
in the
Principal
Cities

(Concluded from Page 100)

particular class of documents, such as bonds, contracts, reports of annual audits, annual budgets, summary of school census, legal matters, county statistics, salary schedules, sheriff settlements, treasurer reports, and such other documents as are kept by the superintendent. Each folder used in the file is labeled with the name of the document that is filed in it, and numbered to correspond with the number on the guide behind which folder is filed.

VII. Board Procedure Index

File Drawer No. VII is a file drawer 3 by 5 in., 24 in. deep and built on roller-bearing slides.

Alphabetical Guides. A set of alphabetical guides is used in this file drawer 3 by 5 in.; cut 1/5; 5 positions; lettered A to Z; numbered consecutively; 80 subdivisions; medium weight manila pressboard; celluloid tabs.

Use of File. This file is used to index all orders made by the county board of education. The following form is a plain bristol-board card, 3 by 5 in. It is used as an index reference, giving order number, date, book number, page, and to what the order applies.

The illustration on Page 98 shows Robert W. Tallent was employed as a school supervisor, received his salary for two months, and resigned. Order No. 400 employed Mr. Tallent and order No. 475 accepted his resignation. Order numbers 445 and 460 authorized the treasurer to pay his salary. Notice how claim numbers 730 and 760 give quick reference to the expenditure file, where his report for salary and cancelled checks are fastened together and filed with all other expenditure documents in numerical order.

In indexing any order, whether concerning individuals or other matters, write the subject and location on the lines at the top of the card and fill out the information asked for thereon. This file indexes both the expenditure documents and county-board orders. It is inexpensive and should be in every county superintendent's office.

If two or more cards are necessary to index orders concerning any individual or subject, the second card is filed behind the first and they are numbered 1, 2, etc., on the upper left-hand corner.

VIII. Executive File

File Drawer No. VII. In the right pedestal of the county superintendent's desk is a deep file drawer of the same dimensions and built exactly like the one described and identified as file drawer

No. I. This file is fitted with the same kind of guides and folders as the secretary's file.

Use of File. This is indispensable as a file for a county superintendent in organizing his work so he may accomplish the most of which he is capable. The folders used in this file are labeled to meet his individual needs. He keeps unfinished projects on which he is working at his finger tips. He may have only once a thought that is vital to a certain program or plan of work for his school system. He must have a systematic way of organizing his thoughts until he is ready to work out the plan. A memorandum is made and dropped into the folder, bearing the label of the project on which the thought occurred, and in which other matters on the same subject are filed.

When the superintendent is working in the capacity of purchasing agent, he refers to the folder containing information on supplies. When he is working as publicity agent, he takes out of this file a folder with notes and information on that subject. He may write weekly articles to the local paper. If so, when he finds such information, it is kept in a folder until he is ready to prepare his copy. The same plan is followed on other matters for which he is responsible, such as reports and recommendations to the county board, program of supervising schools, teachers meetings, county statistics, building plans, consolidation, tournaments, etc.

IX. General Index (for Office)

File Drawer No. IX is a file drawer 3 by 5 in., 24 in. deep, and built on roller-bearing slides.

Alphabetical Guides. A set of alphabetical guides is used in this file drawer, 3 by 5 in.; cut 1/5; 5 positions; lettered A to Z; 50 subdivisions; medium weight manila pressboard, celluloid tabs.

Use of File. In superintendents' offices where there is equipment with file drawers or boxes of various sizes and dimensions, it is recommended that all guides used in the standard file cases be numbered with arithmetical symbols and all boxes used without guides be numbered likewise. In using a system of this kind, which is usually referred to as "numerical system," the names and subjects of matters in the files must first be located on the card used in this file. The card which measures 3 by 5 in., gives the file number which refers either to the guide or the file drawer without guides, in which the matter is filed.

The card may be mimeographed or printed on

plain bristol board. This system of filing is used by a few city and county superintendents in Kentucky.

Some Principles in Filing

1. No paper should be folded if it can be filed flat.

2. Every paper in the office belongs either in some file drawer or the wastebasket.

3. Before any paper is filed, it should be identified by its title or code number so that, when it is taken out of the file, it may be returned to the same place. To illustrate: A court decision is received in the office; it belongs in some file. First, the date received is stamped on it; second, label a folder with the title—"Court Decision," then assign it to a file drawer. This document is assigned to file drawer No. VI, and behind guide C and 6. The paper bears the same label or code number.

Documents in numerical files are labeled the same way. For example, an annual inventory sheet for Subdistrict 40, bears the dates it was made out and received in the office. In the upper right-hand corner it has Code No. II-40, which means file drawer No. II, folder No. 40.

4. All folders are filed behind the guides corresponding to the labels, letters, or numbers on them.

5. No document is worth the space it occupies in a file without being dated.

6. Each file drawer is labeled by name or number.

7. The carbon copies of each letter answered should be attached to the face of the letter.

8. If plain folders are used in filing, the guides should be cut 1/5 with tabs in the first, second, and third positions or first and second only.

9. Folders used should be tab height.

10. Angular tab guides are preferable in file drawers near the floor.

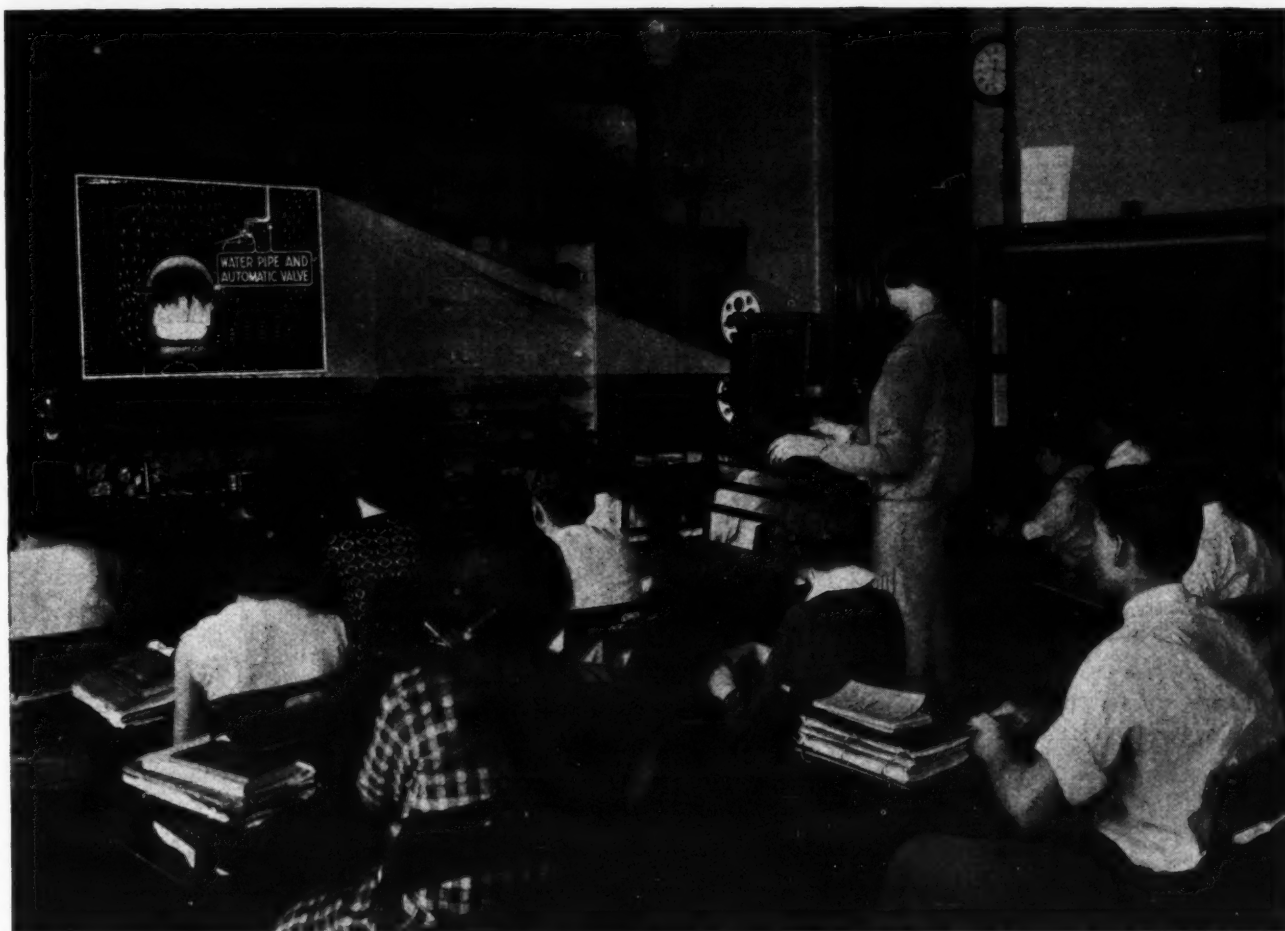
Miscellaneous Recommendations

1. It is important that all file cases be of metal construction except the secretary's file and the executive file, which were designated in the desks of each respectively.

2. Superintendents can purchase file cases of different depths, if they desire.

3. Every office should be equipped with a fire-proof safe, large enough to take care of the permanent records of the system. The Expenditure File, Subdistrict File, and Personnel File should be arranged in the interior equipment of the safe.

4. Every office should have transfer files with equipment adequate for the system of filing.



A FILM LESSON ON HOT AIR HEATING

Never before have pupils had the benefits which EASTMAN Classroom Films now give

ALL of the familiar instruments of education—verbal explanations, text-books, maps, charts, still pictures—are as important today as they ever were. But now there is a NEW teaching aid—a unique addition to modern classroom practice—EASTMAN CLASSROOM FILMS.

.....

These specially prepared motion pictures do not supplant—but supplement—other teaching devices. They fit current school curricula, and they fit the mental capacities of the pupils for whose instruction they are intended. They aid in clarifying the topic being taught and in fixing it in pupils' minds. They afford a wealth of new im-

pressions and visual experiences which children have never had before—and which only *Eastman Classroom Films* can give them now.

As a result, children taught with the aid of these films outdistance those taught without them. The use of *Eastman Classroom Films* raises standings, eliminates many failures, and reduces the cost of education.

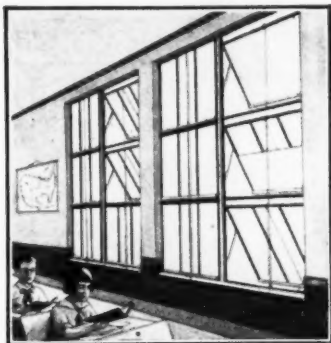
Everyone associated with any phase of teaching should be familiar with this new and highly helpful classroom agency. Write for your copy of the illustrated booklet, "The Story of Eastman Classroom Films."

EASTMAN TEACHING FILMS, INC.

Subsidiary of

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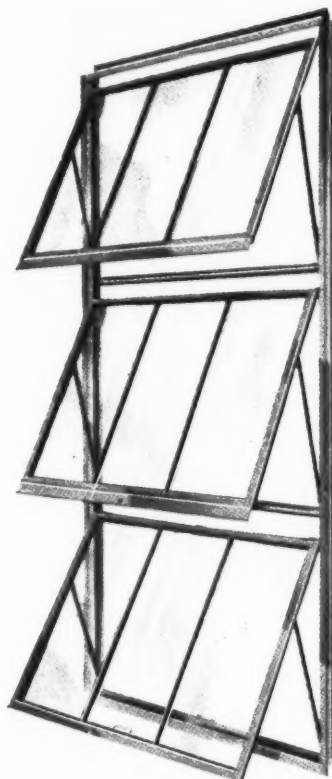


New School Windows for Health and Protection

Truscon Donovan Windows allow an abundance of fresh air, free from draughts, assuring ideal natural ventilation. Diffused daylight—absence of sun glare—saves strain on eyes. Window awnings are eliminated.

Truscon Donovan Windows have always been preferred for quality installations, but now their advantages are within the reach of all. A child can operate the window—movement of the lower sash controls the upper. No window poles, no weights, no chains are required.

Complete information
and literature sent on
request.



Two and three sash high units of Truscon Donovan Awning Type Steel Windows are furnished in various standard sizes.

TRUSCON DONOVAN AWNING TYPE STEEL WINDOWS

TRUSCON STEEL COMPANY
YOUNGSTOWN, OHIO

STEEL WINDOW
DIVISION



OFFICES IN ALL
PRINCIPAL CITIES

Represented on the Pacific Coast by
The Universal Window Company, 1916 Broadway, Oakland, Calif.

The Smart, Modern HOTEL PICCADILLY has Hartshorn Shades on Hartshorn Rollers



Geo. and Edw. Blum—S. Walter Katz, Associate Architects

FINE SHADE PRODUCTS FOR FINE BUILDINGS

NEAR Broadway, in the heart of New York City's theatrical and amusement district, stands the inviting new Hotel Piccadilly—destined to dispense hospitality to visitors from all over the world.

This fine new building has 901 windows, all fitted with window shades of Hartshorn Shade Cloth. And guests of the hotel will enjoy perfect service from the shade rollers—rollers that never balk or stick—HARTSHORN Shade Rollers.

STEWART HARTSHORN CO.
250 Fifth Avenue New York City

Hartshorn
Est. 1860
SHADE ROLLERS and
WINDOW SHADE CLOTH

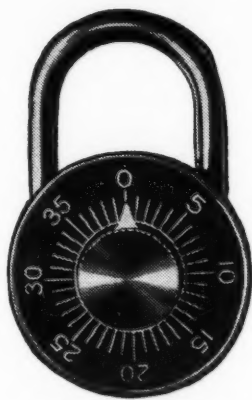


Now a Dudley Combination Lock for Every Purpose!

For your departments of General Science, Chemistry, Physics, Zoology, Botany, Mechanical Drawing, Drafting, Manual Training, Bookkeeping, Domestic Science — wherever a cabinet key lock is now used, whether desk, table, drawer, or bench — you will want

This Brand New Type of Lock →

No more fussing with keys—no more keyboards—no keys to lose—no keys to forget—no more key expense—no master-key menace to fear. This new safe, pick-proof lock eliminates your whole key problem. It operates by touch—simply count the clicks and it opens in a jiffy—if you know the combination.



DUDLEY
B-2 B PADLOCK



The Dudley Combination Padlock continues to be the popular and standard locker lock of America. Some schools prefer this type in various laboratories and shops.

Insist on a complete Dudley installation for positive protection and control of student property. Either type of lock can be furnished in sets having the same combination, if desired.

Send today for your sample for free examination.

DUDLEY LOCK CORPORATION

Dept. A-14

26 North Franklin Street, Chicago



DUDLEY K-1
CABINET LOCK

How Old the New?

Wisdom of the Staggered School-Desk Arrangement Tried Out in 1855

There is nothing new under the sun, says an old proverb. Many inventors of this modern day have learned to their sorrow how near absolute truth the old proverb comes, when they have learned that their wonderful discoveries had been tried out years and years before their birth.

Some five years ago an energetic young California superintendent announced in the columns of the SCHOOL BOARD JOURNAL, a plan for saving classroom space, and for improving the lighting of desk tops in unilaterally lighted rooms. The plan was simplicity itself and consisted merely in staggering the rows of desks. It is doubtful whether any living schoolman, to whose attention the Californian's suggestion came, was aware of the fact that the idea had been tried out nearly seventy years earlier, and had indeed received the recognition of a patent allowed by the U. S. Government in 1855.

Through the courtesy of Mr. Adolph W. Pressler, agent of buildings for the Union School District of Keene, New Hampshire, the JOURNAL has recently received a circular illustrating a plan for diagonal seating, identical with the one suggested by the California superintendent five years ago. The inventor was a certain Virgil Woodcock, of Manchester, N. H., who apparently had some decidedly modern notions about newspaper publicity, and who did not fail to use the exhibit idea of bringing school authorities in direct touch with his product.

To school committees which adopted his idea, Woodcock issued a formal permit, which in blank form apparently served also as advertising circular. The accompanying illustration which explains the diagonal seating plan rather well, headed the document. This read in part as follows: "To all to whom these letters patent shall come: Greetings

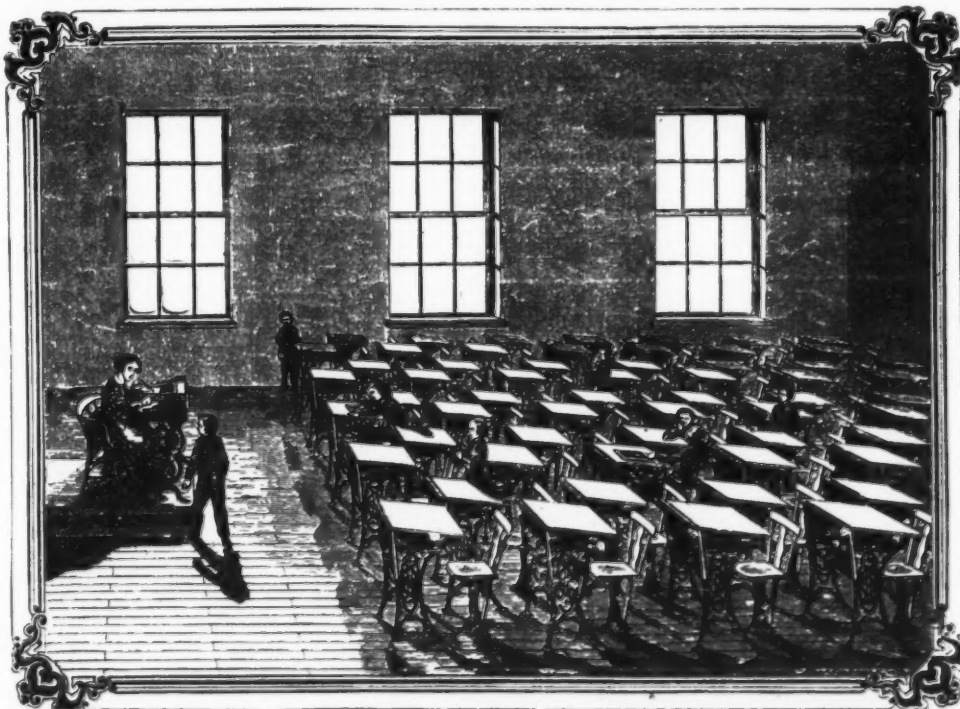
Whereas, I, Virgil Woodcock, a citizen of the United States, have invented a new and useful arrangement in school desks and seats, for which I have received from the United States Letters Patent for the term of fourteen years from the sixth day of March, A. D., eighteen hundred and fifty-five.

"I claim the Diagonal Arrangement of the Desks and Seats as set forth in said letters patent.

"Therefore, know all men by these presents, that I, Virgil Woodcock, of Swanzy, in the county of Cheshire and the state of New Hampshire, for and in consideration of the sum of.....dollars and.....cents, to me in hand before the delivery hereof well and truly paid by.....of....., the receipt whereof I hereby acknowledge, have given, granted, bargained, sold, and by these pre-

sents do give, grant, bargain, sell, alien, enfeoff, convey, and confirm unto the said.....heirs and assigns, the right which I have by said patent to use said arrangement of desks and seats within the limits of the.....and within those limits only.....heirs and assigns for and during the term of the aforesaid patent, and I hereby agree to warrant and defend.....against the lawful claims of all persons claiming to use the arrangement under me or my heirs.

"In witness whereof, I have hereunto set my hand and seal, thisday of.....in the

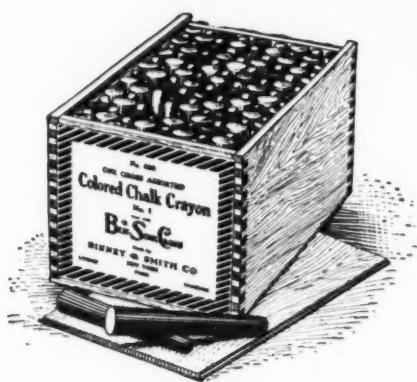


'STAGGERED ARRANGEMENT FOR SCHOOL DESKS TRIED OUT IN 1855

The above illustration, taken from a circular issued by Virgil Woodcock in 1855, is interesting not only for the staggered arrangement of desks which it suggests, but also because it is one of the first examples of the single desk recommended for school use. The lighting, it will be noted, is largely from the right and front, an arrangement which has been entirely discarded.

COLOR ON BLACKBOARDS

Underscore headings with colored chalk for emphasis... box attendance records in colored borders... use colored chalk for map and chart work... for "Good Health" records. And use Binney & Smith Co. fine colored chalk crayons for these purposes



No. 400—Colored Chalk Crayon—144 sticks of Grade I... the strongest colors it is possible to make... packed in a wooden box to prevent breakage. 16 colors to the box, but can be obtained in solid colors or in any assortment of colors desired.

Testimonials from leading school officials furnished on request.

BINNEY & SMITH CO.

41 East 42nd Street

New York, N. Y.

year of our Lord one thousand eight hundred and (seal)"

Virgil Woodcock

Signed and sealed in presence of

The idea of Woodcock was described in a Manchester newspaper for September 22, 1855, in language that reminds one strangely of present-day advertising "literature."

Woodcock's Arrangement of School Desks

"We called attention to this improved arrangement in our paper a few weeks ago. Mr. Woodcock was present at the recent State Fair, exhibiting his model and furniture. Hundred of school Committees, Teachers, and other friends of education saw them, and were delighted. Some have resolved to take out their desks and put in these; and many will do so when they duly consider the real economy in so doing. This arrangement is destined to revolutionize our schoolrooms, and cause many a weary teacher and perplexed pupil to rejoice.

"We cannot do better than give the inventor's own description.

"My claim embraces the Diagonal Arrangement with double rows of single desks and chairs, and possesses great and signal advantages over any other arrangement, and gives to every scholar a separate desk and chair, and the full control of his books and writing; it releases every one from any interference with another, and gives to all the privileges of inhaling the pure air without making it secondhanded from the one sitting near him, as by the old method of double desks. So great is the saving in room that hereafter all double desks may be entirely dispensed with for a single desk and chair. By this arrangement as many scholars can be seated at single desks as at double ones, and they will only occupy the same floor room. There is also a great gain over single desks as arranged in the common way in schools by seating forty-eight scholars in the same place as thirty-six are commonly seated, (a gain of one-fourth, and so in proportion for a greater or less number). The desks and chairs are arranged diagonally on the floor so that no one scholar can see the face of another without one of the two being at right or left half face. When the school is called to procession, all can rise at once and step into files in the aisles without coming in contact with one another. Scholars are more directly in view of the teacher, and can therefore be kept in better

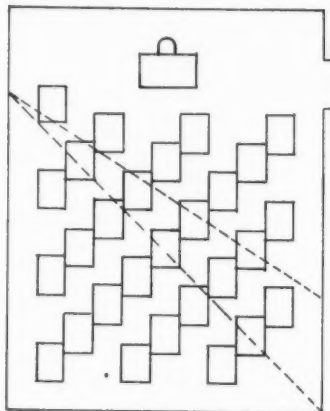


FIGURE 8

PLAN OF CLASSROOM WITH STAGGERED DESKS
DISCUSSED BY DR. HENRY EASTMAN BENNETT BUT FOUND TO BE UNDESIRABLE
FROM THE TEACHING STANDPOINT

order, which greatly diminishes the labor of the teacher. By my new arrangement it is not necessary to increase the size of the room beyond what is required to seat with double desks, and also gives all those important advantages gained by the combined and diagonal arrangement. Each scholar's desk is arranged opposite the seat space of the opposite scholar, thus completely separating them and preventing playing and whispering except by the agonizing method of wriggling their heads as shown by the attempt of the two little fellows in the middle of the room.

"Teachers who have used these desks speak of them in the highest terms, as contributing to facility in management, and, of course, to all the incidental physical, mental and moral advantages of proper furniture, and good order.

"We have one schoolroom in this city furnished in this way, which we should be happy to exhibit to those who may desire; and, also, to give any other information in regard to an improvement which promises so much good to our schools, either personally or by writing.

"Let no new schoolhouse be completed before this mode of seating is duly examined."

It is not known to what extent Woodcock's patent was adopted by the hard-headed Yankees of his day. Its advantages were most fictitious. The economy of floor space claimed for diagonal seating is entirely an imaginary one as Dr. Henry Eastman Bennett pointed out in the JOURNAL for July 1926, page 46. It is likely that Woodcock met with the discouragement which schoolmen deal out to all who violate their conventional notions of classroom arrangement.

It may be added, however, that Mr. Pressler tried out the Californian's plan in several rooms in the Franklin Junior High School, at Keene, in 1924, and found the claims made for it to be entirely justified.

Preventing High-School Loafing

—The school board and the professional school executives of Newport, R. I., are waging a strong fight against the waste of time and inattention to study on the part of high-school students. Under the leadership of Supt. H. W. Lull, the school board has amended its rules, imposing as severe penalties as are possible under the state laws.

One rule provides that every pupil shall make reasonable effort in his studies. Persistent failure of a pupil to keep up in his work will be considered cause for suspension. Another rule provides that no pupil shall be permitted to participate in any school entertainment, sport, or publication, or other extracurricular activity, or to represent his school, unless his record in attendance, deportment, and scholarship is satisfactory to the principal.

—Pittsburgh, Pa. The school board has adopted new rules governing the operation of school lunchrooms. The rules were prepared by Supt. W. M. Davidson and went into effect on February 5. The rules read as follows:

1. In high-school lunchrooms, all pupils scheduled for lunch at a given period must report to the lunchroom and remain in the building during the entire lunch period.

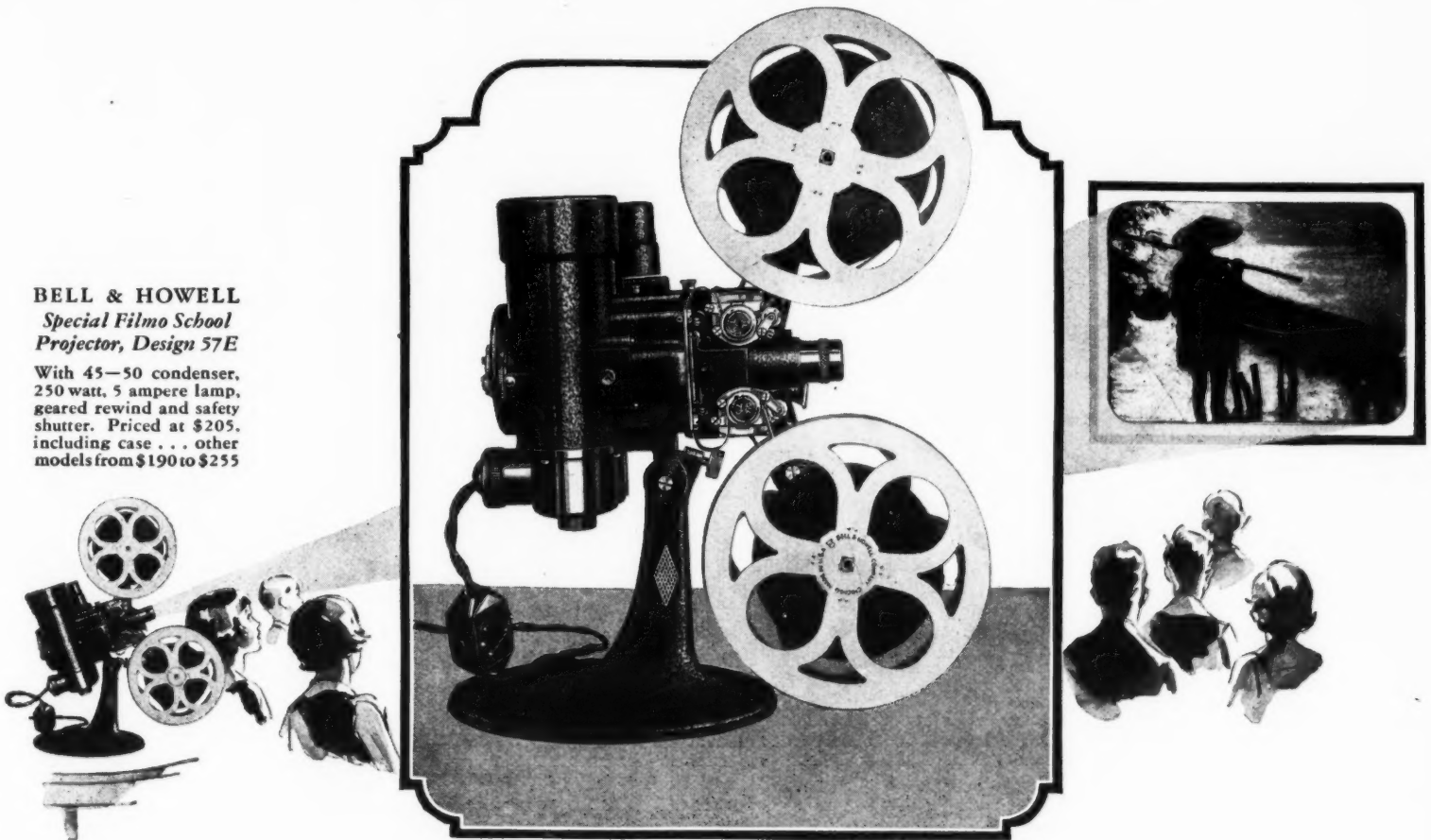
2. High-school pupils will be permitted to return to their homes for lunch upon the presentation of a written request from a parent and the approval of the principal.

3. High-school principals will be held responsible for the observance of the regulations in their schools.

Let the Children *Visualize it* with Educational Movies

BELL & HOWELL Special Filmo School Projector, Design 57E

With 45-50 condenser,
250 watt, 5 ampere lamp,
geared rewind and safety
shutter. Priced at \$205,
including case . . . other
models from \$190 to \$255



For Clear, Unflickering Pictures the New BELL & HOWELL Filmo School Projector is Recommended

THE absorbing interest with which children view movies projected on the schoolroom screen has won for the movie projector an all-important place in modern school equipment.

Any projector, however, to qualify for this special type of work must be designed accordingly. This explains the remarkable interest now centering around the new Bell & Howell FILMO School Projector, built especially for class room and assembly hall use by Bell & Howell, for 22 years America's foremost manufacturers of professional motion picture cameras and equipment. Here are a few of its outstanding advantages.

It projects pictures of matchless brilliance and clearness. Its wonderful nine-to-one mechanical movement does away completely with eye-tiring flicker and produces pictures as clear and steady as any seen in the finest theaters.

It uses the compact, non-inflammable 16 mm. film. It

is quiet in action and operates from any light socket. It runs film forward or backward. For "still" projection, it stops instantly on any single frame without inconveniencing the operator, endangering the film or obscuring the picture. It tilts to any angle—throws pictures to any height; has instantly adjustable projection lens; is rugged, compact, light in weight, easy to carry and easy to store; and yet is so simple in construction that any teacher or student with a few minutes' practice can operate it.

With B. & H. Superbrite equipment Filmo delivers greater illumination to the screen than any other 16 mm. projector made.

Let Bell & Howell tell you about the wealth of Educational Films available to schools everywhere—also further facts regarding Filmo. Send coupon for the new booklet, "Filmo in Schools and Colleges."



BELL & HOWELL

Filmo

Bell & Howell Co., Dept. D, 1814 Larchmont Ave., Chicago, Illinois
New York, Hollywood, London {B. & H. Co., Ltd.} Established 1907

BELL & HOWELL CO.

Dept. D, 1814 Larchmont Ave., Chicago, Ill.

Please mail me your booklet, "Filmo in Schools and Colleges," and give me further information regarding Bell & Howell equipment for school use.

Name..... Position.....

School.....

City..... State.....

School Paste

A WHITE, clean paste put up especially for School use. Its quality is vouched for by Sanford's and its price makes it the most economical to use.



No. 755—Gallons
Also in Half Gallons

THIS is a black aniline ink. Especially satisfactory for school purposes. Will not thicken in the ink well. Writes a deep black and dries black.



No. 751—Quarts
No. 752—Pints



No. 711—Quart

SANFORD'S SCHOOL INKS AND PASTE

HAVE WON THEIR REPUTATION FOR HIGHEST QUALITY ON MERIT AND SERVICE. THE RESPONSIBILITY OF SCHOOL BUYERS IS GREAT, BUT WHEN THEY GIVE THEIR SCHOOLS SANFORD'S PRODUCTS, THEY KNOW THEY ARE GETTING THE BEST PRODUCTS ON THE MARKET.

Write for Our School Supply Price List.

SANFORD MFG. CO.

CHICAGO

NEW YORK



Sanford's
Glass Inkwells

THESE wells are blown in clear flint glass on our own molds. They are in 3 sizes, No. 1, No. 2 and No. 3, with wood top corks.

For the School Office

Premium Writing Fluid



Qt., Pt., 1/2-Pt.

THE best Ink for use in homes as well as in all business offices. It writes a navy blue which is easy to read and in a short time turns to an intense and permanent black.

For all records where absolute permanency is required.

Library Paste

IS the best paste for the office of the school. It sticks instantly and holds. It remains soft and moist in the package indefinitely. Never stains.



Qt., Pt., 8-oz., 5-oz.



A VERY excellent School Ink, permanent and most satisfactory for composition book use.

New Rules of the Board of Education of Rockford, Illinois

The school board of Rockford, Ill., has adopted new rules to govern the administration of the school system. The rules read as follows:

I. Organization

1. It shall be the duty of the president of the board of education of the school district of Rockford, Ill., to preside over the sessions of the board, to maintain order, and enforce the rules of the board.

2. At the first regular meeting of the board, which shall be held each year after the city council of the city of Rockford shall have confirmed the nominations of persons nominated by the mayor as members of the board, the president of the board shall appoint the following standing committees, and shall designate the person who shall act as chairman thereof:

- Committee on educational affairs.
- Committee on business and finance.
- Committee on buildings and grounds.
- Committee on purchasing.

3. Each of the committees shall be composed of three members.

4. Each of the committees shall hold at least one regular meeting during each month of the year, and such other meetings as it may deem advisable. Each committee shall select the time of holding its regular monthly meeting.

5. In the event of any vacancy on any committee, occurring by reason of the death or resignation of any member, or for any other reason, the president of the board may appoint some other member to fill such vacancy, and in the event the chairmanship of any committee shall become vacant by reason of the death or resignation of the chairman thereof, or for any other reason, it shall be the duty of the president to immediately designate a member of said board to act as chairman of the committee. In the event of the temporary absence of the chairman of any committee, the president of the board shall designate some other member of the committee to act as chairman of such committee during the temporary absence of the chairman thereof. And also may appoint some other member of the board of education to act on such committee temporarily.

6. The committee on educational affairs shall make reports and recommendations to the board of education in respect to the appointment of the superintendent of schools, principals, supervisors, teachers, supervisor of hygiene, supervisor of dental hygiene, psychiatrist, director of attendance and research and his assistants, and shall make its reports and recommendations on such other matters as shall pertain to instruction in the public-school system.

7. The committee on business and finance shall make reports and recommendations to the board of education in respect to the appointment of the attorney for the board, chief clerk, clerks, and stenographers employed in the department of business administration in the public-school system and shall present with its recommendations the annual budget, and it shall report and recommend to the board of education all matters pertaining to the revenue and the provision of funds for the operation of the public-school system.

8. The committee on buildings and grounds shall recommend to the board of education the appointment of the superintendent of buildings and grounds, architects, engineers, janitors, custodians, carpenters, painters, and employees who have to do with the maintenance, repair, and upkeep of buildings and grounds, and shall report to the board on all matters pertaining to the construction, repair, upkeep, and maintenance of buildings, including the purchase and improvement of school sites and grounds.

9. The committee on purchasing shall recommend and report to the board of education on all matters pertaining to purchase of supplies and equipment for the public-school system, and all requisitions shall be referred immediately to such committee without the necessity of action by the board of education. Such committee shall also recommend to the board the appointment of the purchasing agent for the board of education and the employees of his office.

10. It shall be the duty of the president of the board to refer all new business to the proper committee for its consideration, report, or recommendation.

11. The president shall be a member ex officio of all committees, although he shall not be required to attend committee meetings. He shall keep himself informed in respect to the business of the various committees and exercise general supervision over their work.

12. All special committees shall be appointed by the president.

13. Annually, at the first regular meeting of the board of education after the city council shall have confirmed the nominations of the mayor for members of the board of education, it shall elect one member to be secretary of the board of education, who shall hold office for one year.

14. In the absence of the president at any meeting of the board, the board shall choose a president pro tem, who shall preside at such meeting.

II. Meetings of the Board

1. The board of education shall meet on the second and fourth Monday of every calendar month at 7:45 p.m., in the room of the board of education in the administration building. Whenever the regular meeting falls on a legal holiday, the meeting shall be held the next business day thereafter. The place of meeting shall be changed temporarily by a vote of the majority of the members of the board in attendance at any regular or special meeting.

2. Special meetings shall be held at any time at the call of the president, or any five members of the board of education, provided that written notice shall be given to the president and each member of the board of education by mail, special delivery postage prepaid, addressed to such president and members at his and her post office address, which written notice shall be mailed at least 24 hours before the time stated for such meeting. The purpose and object of such special meeting shall be stated in the written notice.

3. All meetings of the board of education shall be open to the public; provided, however, that whenever seven members of the board in attendance at any regular or special meeting shall believe it to be for the best interest of the public-school system, to transact certain business in the presence of the members of the board only, and such officers and employees thereof as it may direct to be present, then the board shall go into executive session for the purpose of the transaction of such business.

4. A majority of all members of the board shall constitute a quorum for the transaction of business,

(Continued on Page 110)



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VISUAL EDUCATION

is undoubtedly one of the best ways to leave lasting impressions on the minds of the students. Blackboard illustrations also make the class lessons more full of interest and correlation possibilities.

"OLD FAITHFUL" "HYGIEIA" CHALK

is popular everywhere with teachers because it makes a broad white mark that can be readily seen all over the school room. It erases easily. "HYGIEIA" may be had in round or hexagon shaped sticks and in hard, soft or medium grades.

For Brilliant Colored Chalks - Specify "Old Faithful" 500 Series

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Chemical Laboratory Desk with Fume Hoods accommodating 16 students working in sections of eight.



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Division of Laboratory and Vocational Furniture

809-810 Kimball Bldg.,
A. E. KALTENBRUN,
Director of Sales.

306-308 So. Wabash Ave.,
Chicago.

(Continued from Page 108)

but a smaller number may vote to send for absent members or call the roll, record the names of absentees, and adjourn.

5. *Order of business:* At all regular meetings, after calling of the roll and reading and disposition of the minutes, the order for business shall be as follows:

- a) Receiving petitions and communications.
- b) Reports of standing committees.
- c) Reports of select committees and superintendent of schools.
- d) Unfinished business of previous meetings.
- e) New business.
- f) Motions and resolutions.
- g) Adjournment.

6. For the general transaction of business the ordinary parliamentary rules shall be observed; and in case any disputed question shall arise, Roberts' Rules of Order, revised, shall be taken as authority.

7. *Vote:* When a question is submitted to vote, every member present shall vote upon it, unless excused by the board, or unless he or she is financially interested in it, in which latter case he or she shall not vote. Every motion shall be reduced to writing, if the president or any member of the board so desires.

8. A member shall not leave a meeting, unless excused by the chair. Failing to obtain such consent, he may, nevertheless, be excused by a vote of a majority of the members present.

9. Upon any question requiring the expenditure of money, the roll of board members shall be called and their yeas and nays recorded. The roll of board members shall be arranged by the chief clerk in alphabetical order. The yeas and nays shall be taken and recorded in a like manner upon any other question, whenever requested by any member of the board or the president.

10. *Reconsideration of questions:* When a motion has been carried in the affirmative or negative, it shall be in order for any member who voted on the side which prevailed, or who was absent when the vote was taken, to move a reconsideration thereof at the same meeting, or at the next regular meeting of the board, but not any time thereafter, but no question that has been once decided and once reconsidered, and decided a second time, shall be again reconsidered.

11. *Introduction of new matter:* When any new matter shall be introduced at any meeting, it shall be referred by the presiding officer without discussion, to the appropriate committee, and laid over until the next meeting, unless by consent of seven members of the board, the same shall be taken up and immediately considered. Provided, however, if the proper committee shall make a report upon any new matter, which report shall be concurred in or consented to by a majority of the members of the committee, the board of education may consider and act upon the subject matter of the report of such committee at the meeting of the board at which the report of the committee is first presented, unless three members of the board shall request that the consideration of the report of the committee and of the subject matter of such report be postponed until the next meeting of the board.

12. Committees shall report all matters submitted to them as soon after such submission as reasonably possible, and such reports shall be in writing. Every committee report shall be signed by a majority of the committee making it.

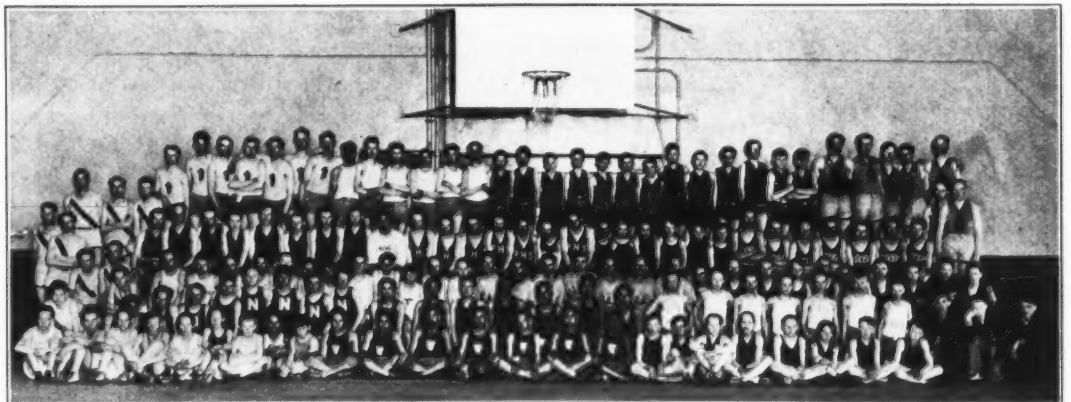
13. *Appeals:* Any member may appeal from the decision of the chair.

14. *Suspension of rules:* By the votes or with the consent of seven of the members of the board, any of these rules, so far as it applies to a subject under present consideration, may be suspended, but none of these rules shall be repealed, altered or amended, except upon an affirmative vote of seven members, upon a motion or resolution presented at some previous regular meeting of the board.

III. General Administrative Organization

1. The general administrative and supervisory work of the school system shall be divided into several departments established by authorization of the board of education and corresponding in general to those represented in the schools, such as (a) elementary education, (b) junior-high-school education, (c) senior-high-school education, (d) new buildings and equipment, (e) business, (f) attendance, census, and employment, (g) building and grounds, maintenance, and operation, (h) fine arts, (i) industrial arts, (k) health, (l) kindergartens, (m) home economics, (n) evening schools, (o) teacher appointments and assignments, (p) libraries and textbooks, (q) special schools. The superintendent shall direct and supervise each of these departments as provided and shall under the gen-

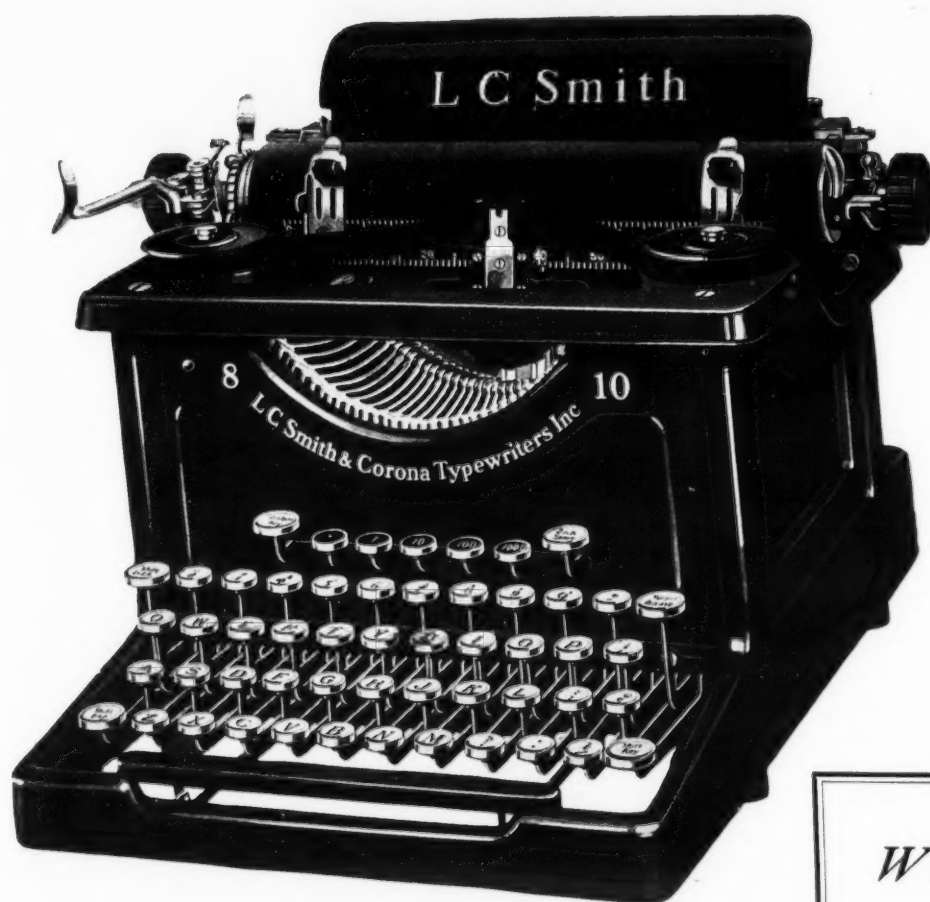
(Continued on Page 115)



A NOVEL BASKETBALL TOURNAMENT

The schools of Lead, S. Dak., hold an annual basketball tournament for younger boys. The tournament is restricted to youngsters who have never played on a first team and are ranged according to weight into 75, 85, 100, and 115 pound teams. The time of playing the match game is shortened to suit the endurance of the younger boys. At the last tournament held in 1928 more than 200 boys took part. One of the teams in order to have space for practice kept its outdoor field clear of snow all winter. The boys in the middle center of the above picture are pupils in the Rapid City Indian School.

The Typewriter of extraordinary advantages



COMPLETENESS and durability are probably the two most important factors to be considered in selecting a typewriter for use in schools and colleges.

The L C Smith typewriter is outstanding in both of these respects.

COMPLETENESS

The L C Smith machine has many features in common with other standard typewriters, but it also has several important ones not found in other writing machines. Owing to the variety of work that can be done on the same L C Smith, the owner is saved from buying additional machines or attachments.

DURABILITY

The remarkable durability of the L C Smith is recognized wherever this machine is used.

A few other advantages of the L C

Smith are: Ball-bearing construction, light touch, easy action, speed, and quietness.

SEND FOR THE FACTS

Write for literature enumerating the many points of superiority that make the L C Smith the ideal typewriter for use in schools and colleges.

We shall also be glad to send you special literature telling about the L C Smith and Corona school service and how this service is designed to aid schools and colleges throughout the country in their efforts to raise the standard of typewriting.

L C SMITH & CORONA TYPEWRITERS INC.
51 Madison Avenue, New York City

Why better ribbons mean better looking letters

The business world today demands a better looking letter.

The typewriters you use are only one factor in the case.

Regardless of the make of the typewriters in your commercial department, they cannot produce the *best* looking work unless you provide them with good ribbons.

Every student learning shorthand and typewriting should be trained to turn out the best work that can be done, as those girls and boys are the stenographers and private secretaries of tomorrow.

Ribbon economy depends more upon the quality of the ribbon than upon the price.

Type Bar Brand ribbons are of the highest quality and may be obtained for any make of typewriter in all standard colors and degrees of inking.

Write or phone our nearest branch office for special school prices.

The Evolution of the Public School Plant

Arthur B. Moehlman, Professor of School Administration and Supervision,
University of Michigan
(Continued from March)

Eleventh Standard Plan

The eleventh phase in the development of the Detroit elementary school plan, designed to meet curriculum needs, is represented by the Ferry type. The Ferry plan provides for a complete 24-section school, but the number of rooms for special classes is less, providing a total capacity of 1,225 as against the 1,380 of the Brady school. It was designed to meet the site requirements of a number of narrow sites owned by the board of education. The complete plan was first used on the Ferry-school site. While designed primarily as a 24-section building, it may be duplicated and a 48-section unit, closed court type, erected.

First Floor			
2 Science rooms	22 ft.	by 30 ft.	
2 Literary rooms	22 ft.	by 30 ft.	
2 Special classrooms	22 ft.	by 30 ft.	
1 Music room	22 ft.	by 30 ft.	
1 Art room	22 ft.	by 30 ft.	
1 Library	22 ft.	by 23 ft.	
1 Recitation room	22 ft.	by 23 ft. 4 ins.	
1 Kindergarten	22 ft.	by 21 ft. 6 ins.	
1 Kindergarten	22 ft.	by 35 ft.	
1 Manual training room	22 ft.	by 31 ft.	
1 Gymnasium	40 ft.	by 60 ft.	
1 Auditorium	35 ft.	by 45 ft. 7 ins.	
1 Girls' shower room	22 ft.	6 ins. by 9 ft.	
1 Girls' locker room	22 ft.	6 ins. by 10 ft.	
1 Boys' shower room	20 ft.	by 7 ft.	
1 Boys' locker room	24 ft.	by 8 ft.	
1 Physical Director's office	11 ft.	6 ins. by 9 ft. 6 ins.	
1 Boys' toilet	24 ft.	by 12 ft. 6 ins.	
1 Girls' toilet	20 ft.	by 15 ft. 6 ins.	
1 Janitor's closet	11 ft.	6 ins. by 6 ft. 6 ins.	
1 Principal's office	22 ft.	by 20 ft.	
Second Floor			
14 Classrooms	22 ft.	by 30 ft.	
1 Open window room	22 ft.	by 30 ft.	
1 Teachers' restroom	27 ft.	by 15 ft. 6 ins.	
1 Lunchroom	22 ft.	by 30 ft.	
1 Kitchen	8 ft.	by 22 ft.	
1 Playroom	40 ft.	by 60 ft.	
1 Clinic	15 ft.	by 10 ft.	
1 Boys' toilet	30 ft.	by 13 ft.	
1 Girls' toilet	25 ft.	by 22 ft.	
1 Teachers' toilet	15 ft.	by 5 ft. 6 ins.	
1 Janitors' toilet	9 ft.	by 5 ft. 6 ins.	

Special Types

The Detroit Day School for the Deaf, completed early in 1924, represents a new development in the specialized type of school and has a capacity for 225 children. The distinctive feature of this plan is the small classroom, with capacity for ten children, developed on the unit plan as one half a regular classroom. If at any time in the future the necessity arises to use this building for other purposes, it would be possible to make it a school for regular elementary work by removing every other partition. A number of the rooms were specially treated mechanically to provide soundproof facilities for these handicapped children. The accommodations consist of:

First Floor			
6 Classrooms	22 ft.	by 15 ft.	
1 Auditorium	32 ft.	6 ins. by 44 ft.	
1 Gymnasium	36 ft.	by 56 ft.	
1 Manual training room	23 ft.	6 ins. by 30 ft.	
1 Science room	22 ft.	by 30 ft.	
1 Printshop	14 ft.	by 15 ft.	
1 Kindergarten	23 ft.	6 ins. by 30 ft.	
1 Kindergarten coat and storeroom	22 ft.	by 15 ft.	
1 Library	22 ft.	by 30 ft.	
2 Hearing rooms	13 ft.	by 9 ft. 6 ins.	
1 Hearing room	22 ft.	by 8 ft.	
1 Principal's office and clinic	22 ft.	by 36 ft.	
1 Boys' shower and locker room	19 ft.	6 ins. by 32 ft.	
1 Girls' toilet	15 ft.	by 15 ft.	
1 Boys' toilet	15 ft.	by 16 ft.	
Second Floor			
13 Classrooms	22 ft.	by 15 ft.	
1 Music room	22 ft.	by 30 ft.	
1 Art room	23 ft.	6 ins. by 30 ft.	
1 Sewing room	23 ft.	by 29 ft.	
1 Cooking room	19 ft.	by 21 ft.	
1 Lunchroom	32 ft.	6 ins. by 43 ft.	
1 Girls' toilet	15 ft.	by 15 ft. 6 ins.	
1 Boys' toilet	15 ft.	by 16 ft.	
1 Girls' shower and locker room	23 ft.	by 32 ft.	
1 Teachers' restroom	26 ft.	by 12 ft. 6 ins.	

One of the modern trends in the development of school facilities for the anemic is represented by the open-air facilities of the Davison School. While the building as erected provides classroom space for 80 pupils, supplemented by ample kitchen, dining room, and cot-room accommodations, the complete plan as drawn makes it pos-

sible to add two additional classrooms, and thus double the capacity of the building without adding space for further auxiliary accommodations.

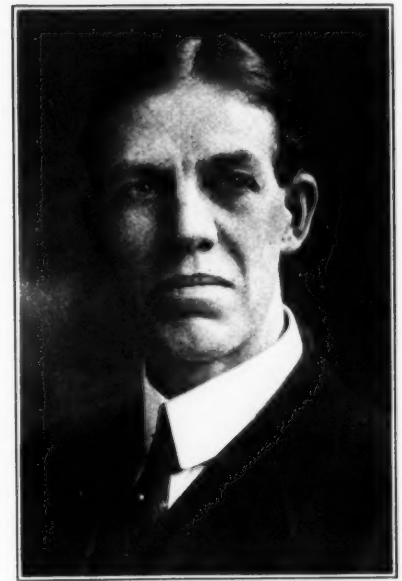
First Floor			
2 Classrooms	21 ft.	by 30 ft.	
1 Recitation room	16 ft.	by 17 ft.	
1 Dining room	18 ft.	by 32 ft.	
1 Kitchen	16 ft.	by 16 ft.	
1 Teachers' restroom	8 ft.	6 ins. by 16 ft.	
1 Girls' toilet room	10 ft.	by 12 ft.	
1 Boys' toilet room	8 ft.	by 12 ft.	
1 Clinic	8 ft.	by 12 ft.	
1 Shower room	11 ft.	by 12 ft.	
Second Floor			
1 Cot room	44 ft.	by 46 ft.	

Summary

The development of the elementary school has been traced in the preceding pages from the most primitive type of the one-room unit, to the highly complicated and skillfully balanced modern design. For summary purposes the entire period of development portrayed in the building plans has been brought together in graphic form in a single diagrammatic presentation. The ten standard types developed may be reduced to five major units, excluding the detached primaries. The first of these (1854-1875) represents the distinctive type developed to meet the needs of the nine-year union school.

In 1872 the present system of grades and half grades was adopted. In 1875 the three-story building was abandoned in favor of the basement two-story type, and the assembly hall of the senior division of the union school disappeared as such, being replaced by the eighth-grade room with one or more recitation rooms adjacent to it. Although drawing (1865) and music (1871) had been added to the curriculum, these were taught in the grade room by the regular or special teachers. The second type (1875-1895) represents the high mark of the eight-year graded school with its narrow curriculum and highly inelastic administrative organization. The third type (1895-1903) shows the first trend toward the more generalized modern type. The kindergarten has been added as a special room. The second and more advanced tendency in this respect (1903-1919) indicates the addition of the so-called special rooms to meet the demands of manual arts, cooking, and sewing. The present period (1919-1925) represents the complete development of the modern school plant in terms of the present-day curricular needs. The present-day plant brought with it adequate provisions for health work through the addition of the gymnasium, auditoriums for socialized and community work, laboratories, clinics, and lunch-rooms. Basements were definitely eliminated as detrimental to health.

All of this development has taken place within three quarters of a century. The question might



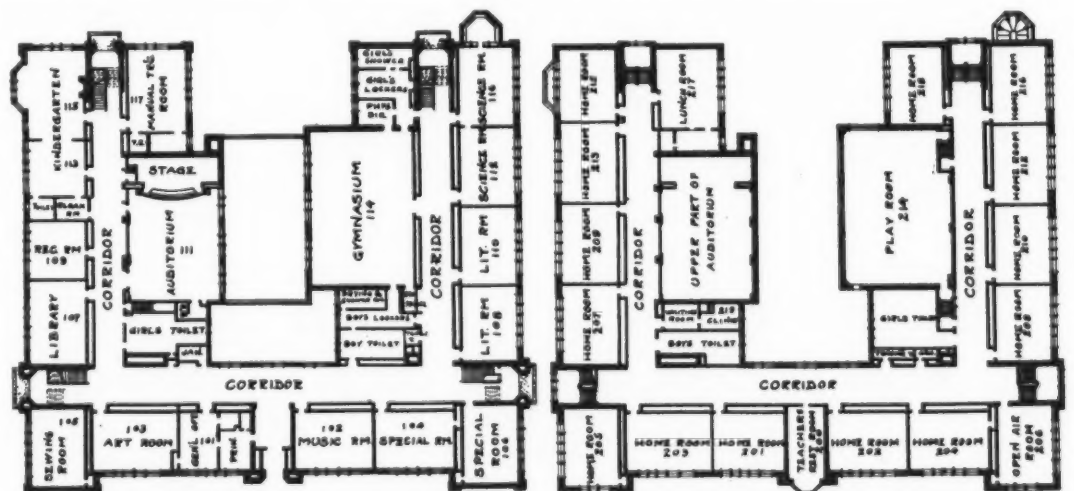
N. D. SHOWALTER

State Superintendent of Public Instruction,
Olympia, Wash.

Mr. Showalter, the new state superintendent of Washington, was educated in the schools of Idaho. He is a graduate of the Lewiston Normal School and the State College at Pullman, Wash. He began his teaching career in March, 1891. In 1905 he became superintendent of schools in Whitman county, and in 1910 was elected as president of the State Normal School at Cheney, Wash. He is the author of a handbook for rural school officers.

well be raised whether the next seventy years will see a like change in the school plant. If so, the present-day conceptions may appear just as archaic to the future generations as the gloomy union buildings do to the present.

Throughout the recent development (since 1919) of the school plant in Detroit is a very encouraging policy that will ultimately produce far-reaching effects. The board of education has adopted as a general policy that the school plant shall be considered merely as a means to an end, rather than an end in itself, and has definitely and completely placed the responsibility for educational planning under the control of the superintendent of schools. The curricular needs are first served through the development of the educational plan in terms of rooms, sizes, location, etc. The architect and engineer then skillfully design the technical factors and the envelope in terms of these primary instructional needs. It may not always be true that such planning will give the cheapest initial cost in dollars and cents but over a period of time, due to its increased efficiency, the difference between a mere building and one designed to meet most effectively the instructional needs, is so great that little can be said in favor of the old hit-and-miss system. The factor of unit construction has also resulted in a building flexibility that the older plans completely lacked, and this again is promising in view of possible future demands.

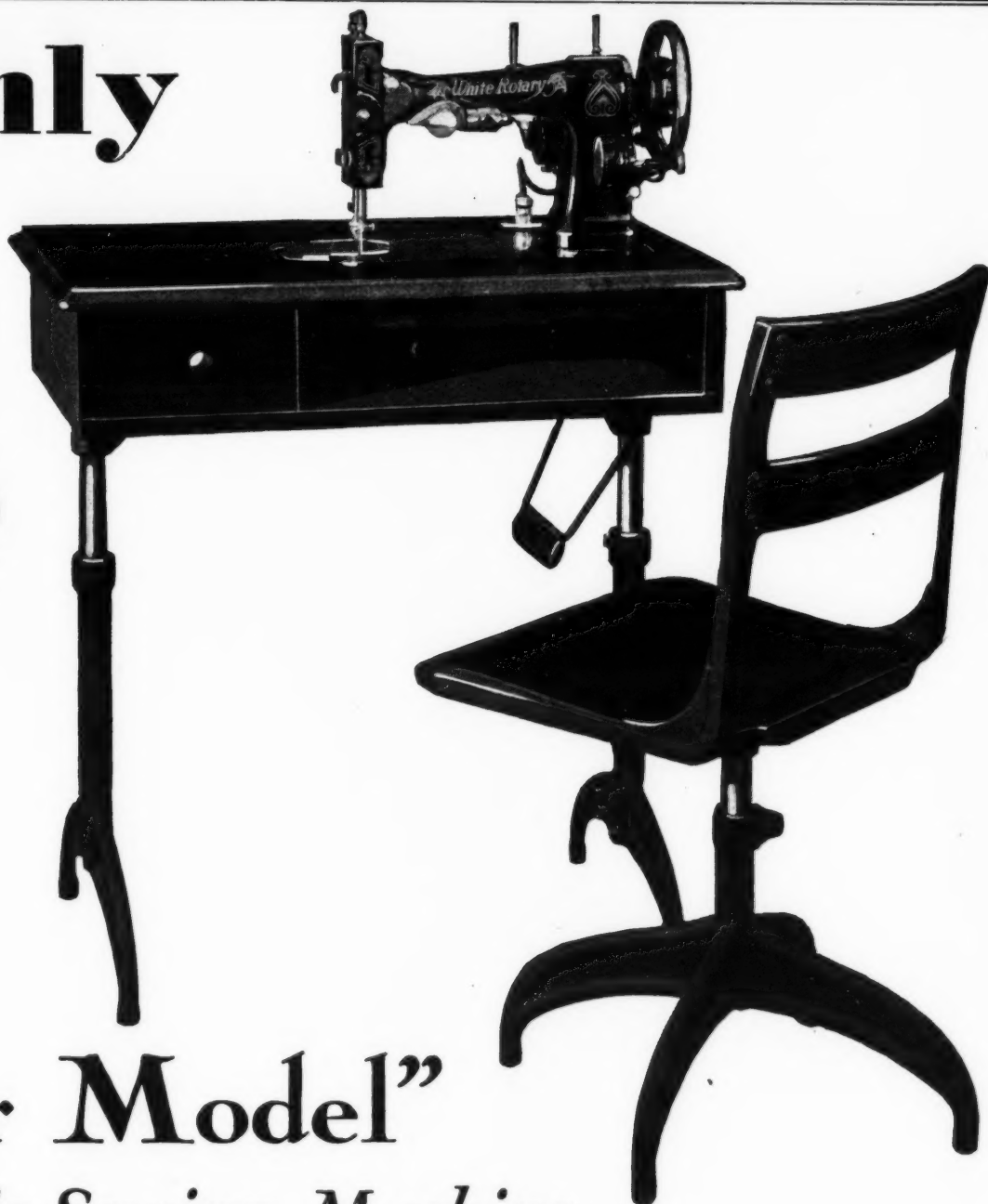


FIRST FLOOR PLAN

SECOND FLOOR PLAN

FERRY ELEMENTARY SCHOOL, DETROIT, MICH.
Malcolmson and Higginbotham, Architects, Detroit, Mich.

The Only One of its Kind!



The New "Educator Model" *Electric Sewing Machine*

Created for School Use by "WHITE"—Distributed by THE THEODOR KUNTZ CO.

THIS new "Educator Model" of the White Rotary Electric was designed by Kundtz and White engineers working in cooperation with authorities on home economics equipment. This latest development in electric sewing machines for schools not only meets but anticipates every need of the sewing class. . . . Add to this the fact that it is produced in the great White Sewing Machine factories, making possible prices well within the reach of every school budget.

The sewing head of this machine represents the very latest White design. . . . Stitch and tension regulators, revolving spool pins, easy threading, the White Sewing Light are all features that make sewing easy and pleasurable for students and teachers of the art.

The adjustability of both the machine and the chair is an exclusive feature found in the "Educator Model" and *no other*.

The White Rotary Electric mechanism is so located on the table that the student controlling the machine with her knee sits in a straight line with her work. The knee lever is so constructed that the pupil may sit close to the machine or away from it as comfort dictates.

The open front and the convenient drawer provide ample storage space.

You want your home economics department to be thoroughly modern, and a source of pleasurable education to all who take sewing courses, but this condition may only exist when the sewing class is properly equipped. The "Educator Model", the only electric sewing machine of its kind on the market constitutes the proper, the most modern equipment available today for sewing classes. Write for full information on the machine and teaching aids supplied with it.

White Sewing Machine Company

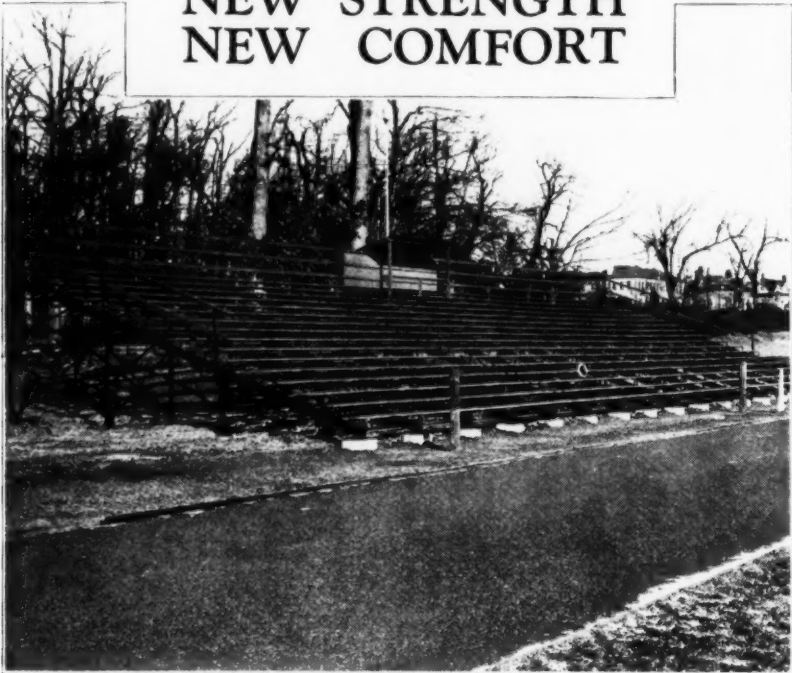
CLEVELAND, OHIO, U. S. A.

Manufacturers of Sewing Machines for 53 Years

Distributed by
WHITE SEWING MACHINE CO.
Retail Stores in Principal Cities
and dealers everywhere

Distributed by
THE THEODOR KUNTZ CO.
District Offices
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NEW STRENGTH NEW COMFORT



Bleachers of Steel for Any Seating Need

Portable — Semi-Portable — Permanent Steel Bleachers that provide *safety* and *comfort* for any number of spectators at any kind of event. The Semi-Portable and the Portable Bleachers are easily erected. They can be left up for years, or taken down from season to season.

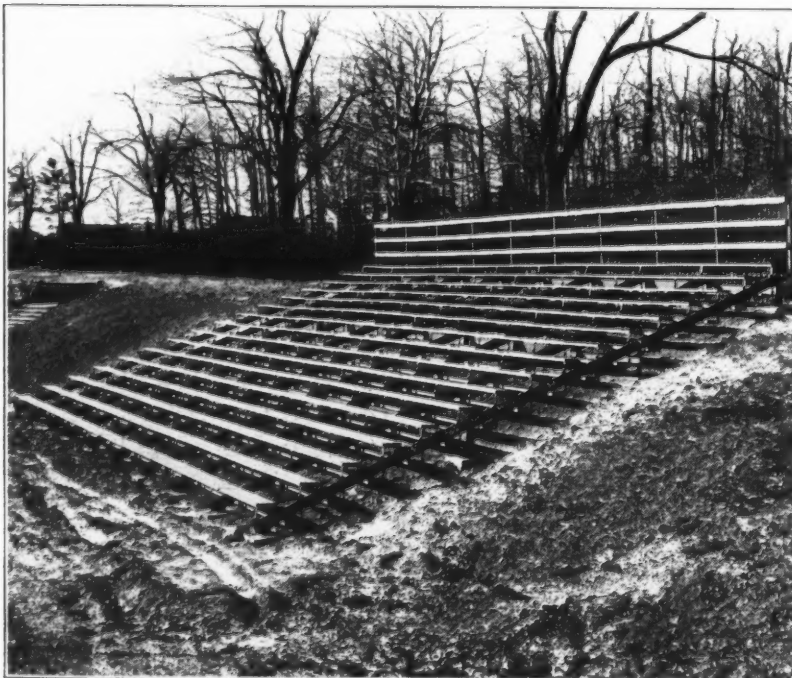
Note, from the photographs shown here, the broad wooden seats, and the footboards which extend far down enough to insure leg comfort.

Moreover, these Steel Bleachers are reasonable in price.

Send for illustrated data.

**PORTABLE — SEMI-PORTABLE — PERMANENT
STEEL BLEACHERS**

Circle A Products Corporation, 600 So. 25th Street
Newcastle, Indiana



**Keep the
Children
SAFE!**

Every school district can afford to build a good schoolyard fence — or, rather, **NONE CAN AFFORD TO NEGLECT IT.**

Look at the automobile advertising—75, 85, 115 miles-an-hour. After accidents happen it's too late to realize that speeders can't see or read "School" signs when going fast.

Build **NOW** and be as safe as you can. We'll be glad to give you a preliminary estimate to have something definite to discuss with your board.

Or we'll gladly send you the new Stewart School Fence Catalog.

THE STEWART IRON WORKS CO., INC.
505 STEWART BLOCK, CINCINNATI, OHIO

Stewart IRON
and
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FENCES

FUN-FUL FUN-FUL FUN-FUL FUN-FUL FUN-FUL FUN-FUL FUN-FUL FUN-FUL



Twenty-eight years of Experience in the design and manufacture of children's outdoor health building play equipment stands behind every piece of FUN-FUL apparatus.

The FUN-FUL line of playground equipment is the most complete ever offered and most school playgrounds are now Hill-Standard equipped. Send for our catalog.

DIVISION F

HILL-STANDARD Co.
EST. 1900
Anderson, Indiana, U.S.A.

FUN-FUL FUN-FUL FUN-FUL FUN-FUL FUN-FUL FUN-FUL FUN-FUL FUN-FUL

(Continued from Page 110)

eral policies of the board of education establish detailed rules and regulations governing the duties, working hours and conditions, vacation periods, and holidays of those engaged for service in these departments, and report the same to the board of education.

IV. Superintendent

1. The superintendent of schools shall be the executive officer of the board of education and shall be directly responsible to it for the execution of its policies; for the faithful and efficient observances of its rules by the employees throughout the system; for the management of the work of the several departments whose duties, apart from those required by law, he shall assign; and for the enforcement of all provisions of the law relating to the operation of the schools or other educational, social, and recreational agencies or activities under the charge of the board of education.

2. He shall attend all meetings of the board of education. He shall attend, work, and advise with the standing committees and special committees of the board of education, except when matters pertaining to his own employment are under consideration.

3. He shall prepare and submit to the board of education for approval, by-laws, rules and regulations, statements of policy, programs, and additional facilities requiring the action of the board of education which he believes are needed for the proper conduct and control of the functions of the board of education and the management of the schools.

4. To assist the board in reaching sound judgments, establishing policies and approving those matters which the law or these by-laws require the board to approve, he shall be responsible for placing before the board, the committee of the whole, and any special committee, necessary and helpful facts, comparisons, investigations, information, and reports and for making available at the proper time the personal advice on special or technical matters, aside from legal questions, of such persons who, in his opinion or that of the board or the president, are particularly qualified to furnish it.

5. The superintendent of schools may recommend for election and appointment, all persons employed by the board of education, and in each case the salary to be paid. All reports of the committee on educational affairs, in respect to the appointment of supervisors, principals, and teachers shall show

whether the appointment or appointments covered by such report were recommended by the superintendent of schools.

6. He shall establish and change the boundaries of school subdistricts and make the necessary rules and regulations of attendance.

7. He shall recommend to the board of education for its approval new courses of study, or the elimination from the system of any included in the curriculum, and the adoption of textbooks.

8. Not later than the first regular meeting in December, he shall cause to be submitted through the committee on business and finance to the board of education a detailed budget for the ensuing year.

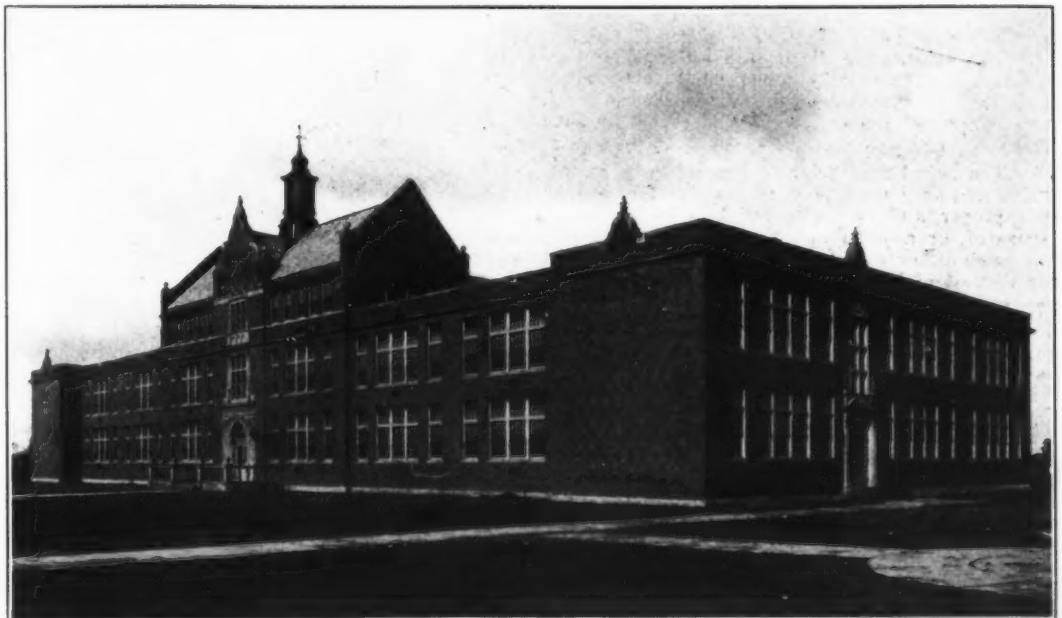
9. The superintendent of schools may recommend through the committee on business and finance, to the board of education, transfers from one budgetary appropriation to another, except that he shall recommend no transfer from the education fund to the building fund or vice versa.

10. The superintendent of schools shall supervise the expenditures of all moneys for the purposes voted by the board of education.

11. In the interest of efficient administration, he shall have the power to decide all matters of administrative detail concerning which no specific provision has been made in the law, these by-laws, or the board of education rules and regulations, reporting at the next regular meeting those decisions which he believes should be authorized by appropriate by-laws or regulations enacted or established by the board of education.

12. He shall as frequently as practicable and upon the request of the board transmit written or verbal reports on the general condition of the schools, the work of the several departments, measures of progress, and the results of the administration of the board of education's policies.

13. In executing the policies of the board of education and otherwise in performing his duties



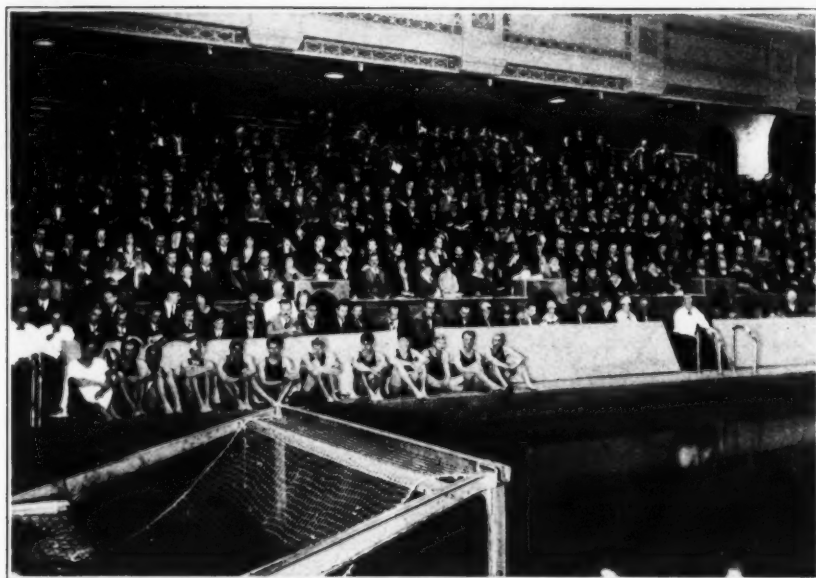
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Detroit Atlas

Portable Bleacher Seats

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**EASY TO ERECT AND TRANSPORT, OCCUPYING MINIMUM SPACE IN STORAGE.
EVERY SECTION AN INDEPENDENT UNIT SUPPORTED ON FOUR STRINGERS.
STEEL AND MALLEABLE CASTINGS CARRY EVERY STRAIN.**



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Intramural Sports Building, University of Michigan, Ann Arbor. Showing the novel arrangement by which the Auxiliary Gymnasium is utilized for spectators during swimming events,—the wall which normally separates these two rooms being lifted by means of motor and counter weights.

This photograph was taken at the official opening of the Natatorium on February 2nd when teams from the Universities of Indiana and Michigan met.

The spectators are seated on DETROIT ATLAS PORTABLE BLEACHER SEATS specially designed to permit a clear view of the entire pool for every person present.

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We are interested in Bleacher Seats. Please send booklet and quote us on:

.....SectionsTiers HighSeats

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Signed.....

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as prescribed herein, the superintendent is empowered to require the necessary assistance of other school employees.

V. Duties of the Attorney for the Board

1. The attorney for the board of education shall represent the board of education in all litigations to which the board may be a party, or in which it may be interested.

2. He shall attend the regular meetings of the board and committee meetings when requested by the chairman of the committee sitting, and shall act in the capacity of a counselor to the board and committees.

3. All school officers and members of the board of education shall have the privilege of consulting the attorney on any school matter without the payment of compensation.

4. The attorney for the board shall render a written opinion on any legal question when requested by the board or any committee, and upon the purchase of real estate by the board, the attorney shall examine the title and render a written opinion concerning it.

5. The attorney shall prepare or supervise the preparation of all legal papers and instruments which shall be executed by the officers of the board, or shall approve the same before execution by such officers.

6. The board may refer to the attorney for attention and action, any and all matters that it may deem proper and advisable for him to supervise, dispose of, or adjust; and the attorney shall perform such other and further duties as the board may request of him to perform.

7. The attorney shall be appointed by the board at the first regular meeting in January for one year, and shall receive such compensation as the board shall determine, payable in twelve equal monthly installments.

FIRE EXIT DRILLS

Basic recommendations for the conduct of school fire drills have been recently adopted by the National Fire Protection Association on recommendation of its committee on safety to life. The recommendations are a part of the general building exits code which the Association adopted in 1927:

1170. The following requirements are of necessity, general in scope, as it is appreciated they

must apply to all types of schools as well as conditions of occupancies such as truant schools, schools for mentally defective, the blind, deaf and dumb, colleges and public schools. It is fully recognized that no one code can meet all the conditions of the various buildings involved and it will be necessary for some schools to issue supplements to these requirements, but all supplements should be consistent with these requirements.

1171. There shall be at least two fire exit drills a month. The purpose of the drill is to insure the safe, quick, and orderly exit of all persons from the building, and in order not to endanger the health of the pupils, drills should not be held during inclement weather, if possible to avoid it.

1172. Drills should be executed at different hours of the day; during the changing of classes; when the school is at assembly; during the recess or gymnastic periods, etc. In other words, they should be executed at such irregular times as would tend to destroy any possible distinction between drills and actual fires. Cards of instruction should be conspicuously posted describing the procedure of the drills.

1173. If a drill is called when pupils are going up and down the stairways, as during the time classes are changing without any semblance of order, the pupils should be instructed to form in file and immediately proceed to the nearest available exit in an orderly manner.

1174. Exit drill alarm systems should be installed in accordance with the requirements of Section 10 of this code. All exit drill alarms should be sounded on independent signal systems and not on the signal system used to dismiss classes. Instructions in the manner of sounding exit drill signals and sending fire alarms should be given to all pupils so that there will be no delay either in emptying the building or calling the fire department in case of an actual fire. Whenever any of the school authorities determine that an actual fire exists, they shall immediately call the local fire department using the public fire-alarm system. (See § 1018.) The pupils should be informed that no criticism will be made of any person sounding an alarm even if there is no fire, provided conditions were such as to indicate a probability of the building being on fire, but they should also be informed that strict discipline will be imposed if any person mischievously turns in a false alarm.

1175. As all drills represent an actual fire condition, pupils should not be permitted to obtain clothing even when in home rooms after the alarm is sounded on account of the confusion which would result in forming the lines and the danger of tripping over dragging apparel. In order to avoid congestion around the school building, which would interfere with the local fire department, each class or group should move to a predetermined point where a roll call can be made to determine that all of the pupils are out of the building. In schools, such as high schools and universities, where classes do not maintain their integrity throughout the entire day, other check-up arrangements shall be made by the school authorities. Where necessary for drill lines to cross roadways, hand signals reading STOP. SCHOOL FIRE DRILL shall be carried by monitors to the traffic intersecting points in order to stop traffic during the period of the drill.

1176. Every fire drill shall be an exercise in school management for principal and teachers. The chief purpose of every drill is complete control of the class so that the teacher will form its ranks quickly and silently, may halt it, turn it or direct it as desired. Great stress shall be laid upon the execution of each drill in a quiet and orderly manner without undue haste. Running or fast walking should be prohibited. In case there are pupils incapable of holding their places in a line moving at a reasonable speed, provision should be made to have them taken care of by the more sturdy pupils, moving independently of the regular line of march.

1177. Monitors and searchers shall be appointed from the more mature pupils to assist in the proper execution of all drills, and certain of them shall be instructed to hold open doors in the line of march, search all rooms, including closets and toilets, take charge of drills in case the teacher is not in the room and assist in every manner to promote an orderly and perfect drill. There shall be at least two substitutes for each appointment so as to provide for proper performance in case of absence of the regular monitors.

1178. It shall be the duty of principals and teachers to inspect all exit facilities daily in order to make sure that all stairways, fire escapes, doors and other exits are in proper condition. Particular attention should be given to keeping all doors un-

(Concluded on Page 118)

ANOTHER SENSATIONAL / ACHIEVEMENT by CYCLONE H-COLUMN POSTS

STRONGER THAN ANY OTHER TYPE
OF FENCE POST OF EQUAL SIZE . .

Six years ago Cyclone announced the now-famous Galv-After process—a revolutionary achievement in fence manufacture. Three years ago Cyclone introduced an improvement equally sensational—Copper-bearing fabric, followed shortly by the first all-copper-bearing steel fence. Now comes the crowning achievement — Cyclone H-Column Posts — making Cyclone an “all-star” fence! Now—matched strength and endurance in every unit!

Tests prove that Cyclone H-Column Posts are stronger than any other type of fence post. Designed especially by Cyclone engineers for Cyclone Fence. Made of special analysis copper-bearing steel. Hot-dipped by the Galv-After process. And that's not all! These stronger posts are now erected with a wonderful new reinforced concrete base which prevents cracking from frost action. Here is a combination for permanence — the post and the base for maximum strength! No increase in price.

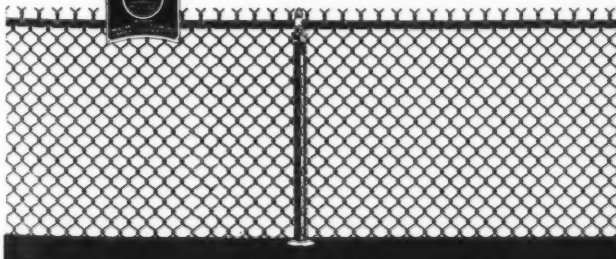
Our own trained men erect your fence—one organization takes Complete Responsibility. This service is nation-wide, available everywhere. Write, phone or wire nearest offices—plan your spring fence installation now!

*Cyclone Fence is made in a variety of styles
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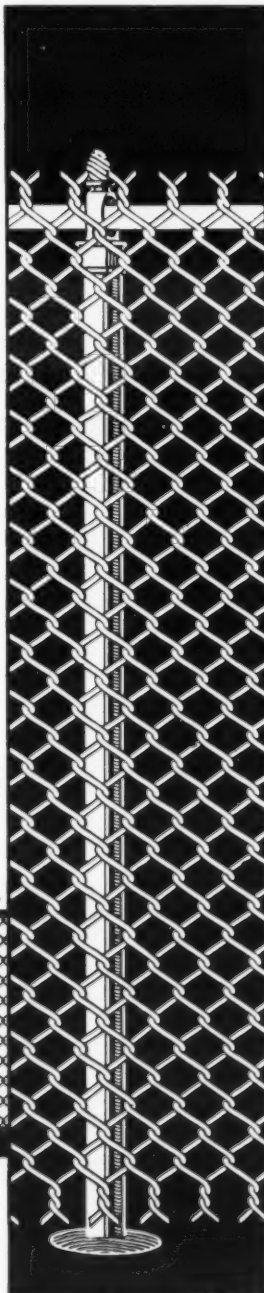
REG. U.S. PAT. OFF.

All chain link fence is not Cyclone. This name plate identifies the genuine Cyclone Fence.



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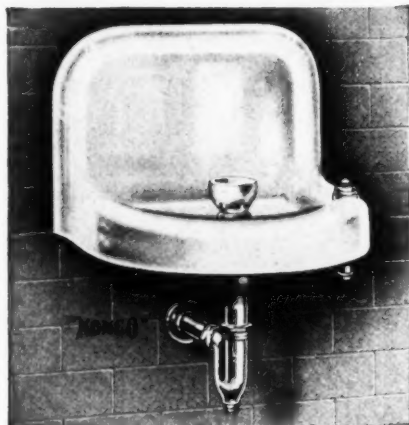


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Consider a Record of almost a Half Century of School Service



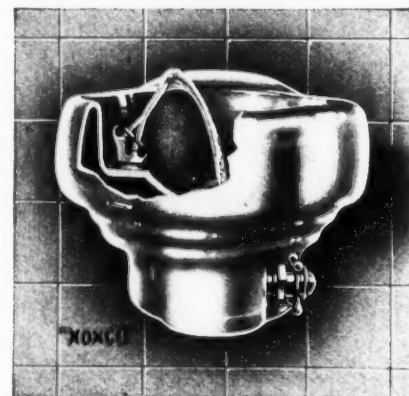
2384 N

Porcelain enamel iron roll rim drinking fountain. Vitreous china bubbler with concealed pressure regulator controlled by china index push button valve. Nickel plated brass trimmings.

No one factor has contributed so much to the safety and health of school children as plumbing fixtures which are thoroughly reliable and scientifically designed from the standpoint of sanitation.

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4419 N

Wall fountain of vitreous china with integral trap housing; furnished with 2-stream mound building projector and automatic stream control. All exposed brass trimmings heavily nickel plated.

N. O. NELSON MFG. CO.

Pioneer Manufacturer of Plumbing Fixtures for Schools

ST. LOUIS, MISSOURI

(Concluded from Page 116)

locked, having doors closed which serve to protect the safety of paths of egress (such as doors on stairway inclosures) and under no conditions blocked open, having windows in such conditions that they may be readily opened where they may be needed as means of access to fire escapes, keeping fire escapes free from all obstructions and clear

of snow and ice, allowing no accumulation of snow or ice or materials of any kind outside exit doors which might prevent the opening of the door or interfere with rapid escape from the building.

Any condition likely to interfere with safe exit should be immediately corrected if possible, otherwise reported at once to the appropriate authorities.

—Cedar Falls, Iowa. The school board has requested Supt. Mahannah to adopt a policy which will prevent the commercial exploitation of school children. The action is the result of a magazine-circulation campaign in which a well-known publishing syndicate used pupils of the high school to solicit subscriptions to magazines. The members of the board had declared themselves not in sympathy with the idea, but had refrained from interfering in a matter that was clearly within the control of the superintendent.

—Chicago, Ill. The establishment of a school for superintendents of school construction in the employ of the board of education has been proposed by Mr. Paul Gebhardt, architect of the board.

The plan calls for weekly or biweekly meetings of the construction superintendents for one-hour periods of instruction. It is believed that considerable savings in money and time will be effected through a more uniform procedure in the supervision and control of school-building construction. It will make possible more intelligent cooperation between the board of education and the contractors erecting new schools, and will insure more strict control by the superintendents in charge of the construction work.

—The school board of Sioux City, Iowa, has been criticized by the local real estate board for its action in employing an outside concern to make appraisals of the seventeen school buildings at a cost of \$2,500. It was the contention of the real estate board that its organization could have made the appraisals at a much lower cost. It was pointed out that the local committee had made the appraisals in the past and these had always been satisfactory.

—Lake county, Minnesota, has been organized as one school district under the consolidated school-unit plan. Under the new plan, the members of the old board of education comprising Mr. John Jacobson, Louis West, W. H. Oppel, Mr. C. G. Rothfus, Mr. W. B. Woodward, and Mrs. Kate Evans have become members of the new board of education.

—Atlanta, Ga. The board of education has proposed a revision of its rules to secure a more thorough study of future budgets. Under the new rules the tentative budget as prepared by the school officials, would be presented at a meeting prior to the one at which it is adopted. The budget would

(Continued on Page 120)

School-Board News

—Mobridge, S. Dak. The school board has eliminated all standing committees. In the future, all school business will be handled by the committee of the whole.

—Pittsburgh, Pa. The school board has received a report from Mr. Charles Reisfar, Jr., director of compulsory attendance, setting forth the census of school children for the year 1928, covering all ages from 4 to 16 years of age. A comparison of the figures of 1928 with those for 1927, shows that there has been an increase of 320 children over 1927. The whole total for 1928 was 160,423, while that for 1927 was 160,103.

Of the total of 160,423 pupils, there were 80,458 boys and 79,965 girls between the ages of 4 to 15 years inclusive. There were 17,300 minors 4 to 5 years of age; 14,426 minors 6 years of age; 14,506 10 years of age; 14,035 13 years of age; 13,706 14 years of age; and 14,523 15 years of age.

There were 99,879 pupils enrolled in the public schools, divided between 50,284 boys and 49,595 girls. The largest number was 74,112 listed in the group from 8 to 15 years of age, and the smallest number, 7,861, was in the group from 4 to 5 years of age. The parochial schools had a total enrollment of 44,322 pupils, divided between 22,119 boys and 22,203 girls. The largest enrollment, 35,481 was in the group from 8 to 15 years of age, and the smallest, 871, was in the group from 4 to 5 years of age. A total of 2,049 were enrolled in private schools, divided between 890 boys and 1,159 girls. There were 14,173 who were listed as not enrolled in any school, of which 7,165 were boys and 7,008 were girls.

—At a school election on March 5, the citizens of Battle Creek defeated the school board's proposal to adopt the 1927 general school law. Of the total of 3,875 votes, 22,532 were against the issue, and 1,343 were for its adoption.

—Great Falls, Mont. The school board has adopted a resolution providing for the organization of an advisory athletic council to supervise athletics in the high school. The council will be composed of four citizens, three members of the school board, the superintendent, the principal of the high school, and the high-school coach.

—Piedmont, Calif. Charges of laxity and inefficiency in the conduct of affairs of the board of education during the past year have been made in the report of the auditing committee of the Alameda county grand jury. Specific instances were cited of negligence in accounting, management, and expenditure of school funds handled by the board. Some of the charges cited were lack of signatures and copies of orders in requisitions for expenditures, laxity in the issuing of official receipts for money paid to the school department, warrants used to pay for articles not intended for school purposes, and advances of school money to employees without vouchers or warrants drawn to cover the amounts. The committee, in conclusion, found that the records are not kept in the office of the board and that no regular system is maintained for the filing of advertisements, bids, estimates, and contracts, also that the business transactions are not fully recorded. The business department, in other words, lacks the equipment and facilities necessary for a complete and adequate school accounting system.

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The new

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Sani-Dri

DRIES QUICKER THAN A TOWEL"

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are briefly, yet thoroughly described in a new booklet just off the press.

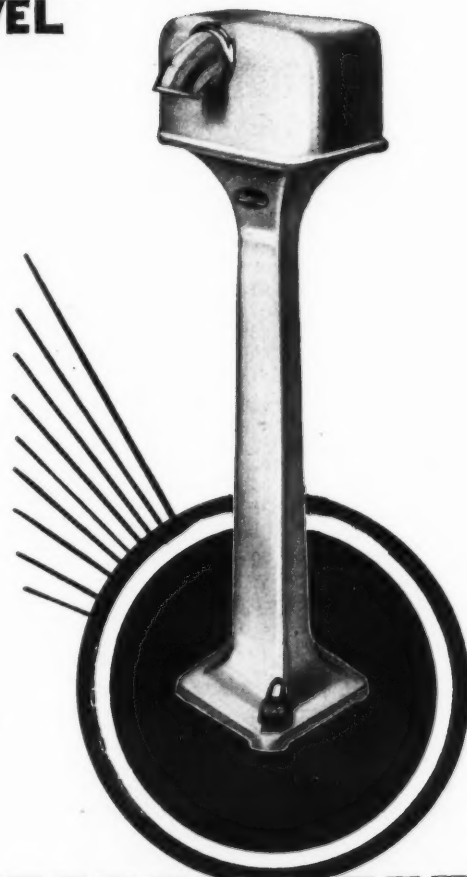
All the details, from the new height and revolving nozzle to the special motor and fool-proof construction are told in this booklet. "12 Points of Perfection". Send for it now—it shows how "litter and expense" change to "service and profit".

Over 2,000 Educational Executives from Colleges and School Districts inspected this new model SANI-DRI at the recent N.E.A. Exhibit. Most all commented on the new speed, the immediate, forceful flow of air, the quick drying and lack of noise. This "Silent F" SANI-DRI is the result of years of simplification—today you find a perfected drier—faster, stronger, better. A more pleasing design, a new height with revolving nozzle and a construction that is mischief-proof. Saves 50% to 90% of your towel costs and renders a sanitary drying service that is as continuous and permanent as your building. Send for the new booklet.

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1 or 50 children at a time and gives them the best of exercise all the year round. All of the features of exercise, amusement, safety, and attraction are combined in the MITCHELL - WHIRL, making it adaptable to the smallest and most timid of children.

*Recommended by buyers of
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1801 FOREST HOME AVE. MILWAUKEE, WIS.

(Continued from Page 118)

be introduced at the first meeting of the board in December, or at a special meeting called by the president during the month, after which it would not be adopted until the next regular meeting of the board.

—Chicago, Ill. The construction of a 25-story administration building for the business and educational departments of the board of education has been recommended recently by Mr. Ernest Withall, business manager of the board. The cost of the building is estimated at \$3,000,000.

The proposed building would be erected on the site of the Jones School and would contain an area of 350,000 square feet of usable office space. All forms of school activities would be housed in the structure and sufficient space would be available for expansion needs during the next fifty years. Nine stories of the building would be available for leasing by societies devoted to educational subjects.

—Danbury, Conn. The board of education has received complaints from two local organizations protesting against the rule charging a flat rate of \$50 for the use of the high-school auditorium. A discussion of the matter in the board meeting brought out that a long list of organizations had been allowed the free use of the auditorium. The board has appointed a committee of three to define what shall constitute educational organizations and to make its report at a future meeting.

—Governor Roosevelt of New York State recommended an appropriation of \$2,450,000 as state aid to rural schools in a special message to the legislature on March 4. The total is \$1,800,000 less than that called for in the Webb-Rice bills, now before the legislature.

With the grant of state aid, the rural school tax, which now varies from \$1 to \$23 per thousand of taxable valuation, according to the wealth of the school district, will be fixed at \$4.

—Wilkes-Barre, Pa. The school board recently received a report, showing that personal taxes for 1927 remain unpaid for one third of the taxables of the city. The total amount unpaid is \$117,566. Added to this, there are still unpaid personal taxes in the amount of \$104,972 for 1926, and about \$62,000 for 1925.

—Data obtained from the state superintendent of public instruction of Michigan shows that nearly \$4,000,000 will be needed annually in order

to equalize the school-district tax rates in Michigan so that none would exceed \$15 per thousand assessed valuation. At present there are 943 districts paying over \$15 in taxes, and there are 75 districts financially unable to pay their debts, and which will require \$60,000 within the next two years to meet their obligations.

Senator P. B. Lennon has proposed a tobacco tax to assist the poorer school districts and those that have taken bonding obligations to provide schools for the children.

Edmonds, Wash. The voters have been asked to approve a special five-mill levy for current expenses of the schools.

—Haverhill, Mass. The school board has adopted a budget for 1929, calling for an appropriation of \$618,475 for school purposes.

—Norwalk, Conn. The cost of operating the public schools in 1927-28 was \$459,306, according to a recent report of the board of education. The cost of elementary and junior-high-school instruction was \$372,655.

—Buffalo, N. Y. The school board has adopted a budget, calling for an appropriation of \$12,668,054 for the year 1929-30. Of this amount, \$9,668,054 must be raised by taxation. The new budget includes an item of \$752,750 to provide for the teachers' salary increases recently approved by the board. It also includes an item of \$480,473 for

AN ADMINISTRATIVE POLICY

For instance, in the field of medical inspection and health work, there is a tendency for the schools to usurp the place of the doctor and surgeon in the community rather than interpret their function to be that of pointing out corrections that should be made, and educating parents as to the necessity and desirability of corrective measures. It is probably easier for the schools to vaccinate, inoculate, operate upon, and do dental work for children than to educate them and their parents concerning such measures, but such a policy merely makes the individual more dependent on society and less able and willing to look after himself after he leaves school.—A. J. Stoddard.

automatic salary increases that are mandatory under the state law.

—Chicago, Ill. The city council has taken action toward relieving the financial situation of the city school system through an order permitting the school board to sell its 1929 tax anticipation warrants. It is expected that the sale of school-board warrants will open outside markets for the securities. It appears the local banks which have \$146,000,000 in 1928 warrants will not take any more, but the New York banks will buy the securities at six per cent interest rates.

—Bridgeport, Conn. The local board of apportionment has reduced the school board's budget of \$2,412,794 by \$26,482. The reduction involved a requisition for teachers' salaries.

—Gloucester, Mass. The school board has adopted a budget, calling for an appropriation of \$375,600 for school purposes. The largest item is \$253,344 for teachers' salaries.

—The school board of Coshocton, Ohio, has adopted a budget, calling for an expenditure of \$216,235 for the operation of the schools during the year 1929. Among the larger items in the budget are \$104,589 for teachers' salaries; \$166,067 for maintenance and operation; and \$112,716 for instruction expenses.

—Canton, S. Dak. Through a policy of rigid economy as a result of a heavy building cost and a general financial depression, the school board has been able to pay off outstanding warrants of \$25,000 and to establish a sinking fund within the past few years. In addition, the school-tax levy has been increased nearly twenty per cent. The improved financial condition of the schools at the present time has been attributed to a better organization for school purchasing and to greater care in handling school business. It is expected that the new budget for the next year will call for an appropriation of \$85,000.

—Shaker Heights, Ohio. The school board has adopted a budget for the school year 1929 calling for an appropriation of \$1,095,824. The two largest items in the budget are \$425,000 for teachers' salaries and \$415,124 for bonds and interest. Other large items are \$65,000 for operation salaries, \$35,000 for miscellaneous operation costs, and \$21,000 for clerical administration expenses.

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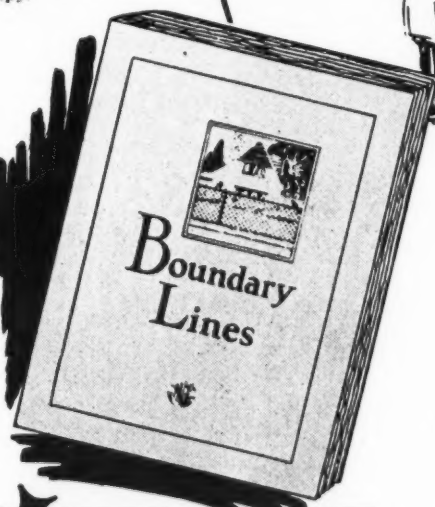
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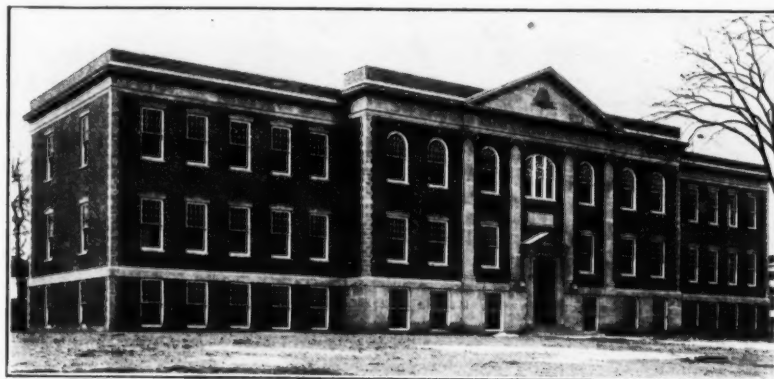
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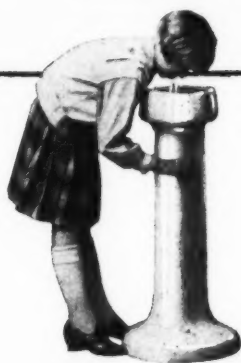
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AFTER a Halsey Taylor fountain is installed there is no danger of frequent servicing. There is nothing to get out of order, despite the fact that unusual features of construction make them the paramount fountains for sanitation. Schoolboard officials know that Halsey Taylor Drinking Fountains provide a welcome freedom from any problem that may have been previously encountered in school fountain installations. Our new manual describes and illustrates the complete line.



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Largest Manufacturers of Drinking Fountains Exclusively

AUTOMATIC STREAM CONTROL
Stream is always at practical drinking height, lips need never touch the two-stream projector!
SAFETY FIRST!

(Continued from Page 120)

—The state education department of Wisconsin, on March 11, distributed \$5,634,000 to elementary school districts and city boards of education of the state. The amount represented the allotment of state aid under the Callahan equalization law, passed by the 1927 legislature. The state aid is paid out of revenue totaling \$6,500,000 received through the 1.1 mills tax on property imposed by the law and supplanting several small school taxes.

The sums of \$160,000 for transportation of school children, and \$240,000 for supervisory teachers, have been distributed in addition to the \$5,634,000. The remainder of the \$6,500,000 goes to the permanent school fund.

—Wisner, La. The citizens recently approved a bond issue of \$100,000 for the erection of a high and grammar school.

—Salem, Mass. The school board has rejected a general salary increase program proposed by the superintendent of schools. The board voted to increase the compensation of men assistants in the high school, the women principals in primary schools, and supervisors of schools. Under the new schedule, men assistants in the high school will receive a maximum salary of \$2,200; women principals a maximum of \$1,800; and elementary teachers the sum of \$100 additional each year after the completion of ten years of service.

The schedule affects a total of 120 teachers out of a staff of 220 and involves a cost of \$8,000 to \$10,000.

—Bangor, Me. Increases in salaries of teachers aggregating \$35,000 have been voted by the school board. In addition to this, the teachers will receive two weeks' more salary because of the increase of the school year from 36 to 38 weeks.

—Plant City, Fla. The local high-school parent-teacher association has voted to cooperate with the school authorities in maintaining a full nine months' school term. The school board has previously stated that the funds in hand were only sufficient for an eight-months' term. The students will be required to pay a tuition of \$8, which will be taken care of by the parent-teacher association.

—Loco, Tex. The voters have approved a school-bond issue of \$20,000 for the erection of a new school.

—Burlington, Iowa. The school board will shortly carry out a school-building program involving a cost of \$700,000.

—Fort Worth, Tex. The school board will present a proposed school-building program to the voters this year. It is pointed out that the school-housing conditions are serious and demand immediate relief.

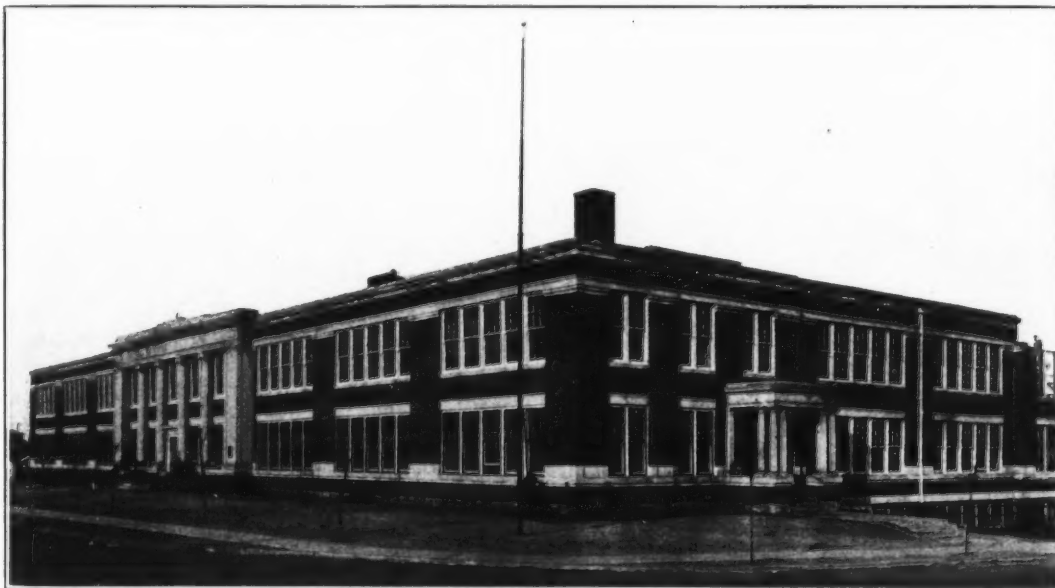
—Galveston, Tex. An extensive program of expansion has been provided for in the recent report of the school survey committee. The report recommends the erection of seven school buildings, including two junior high schools, five grade schools, and an addition to the high school.

—Springfield, Ohio. The school board is planning the erection of a new school, to replace the

Jefferson School which was destroyed by fire. The new building will be erected at a cost of \$90,000 and will be ready for use in September.

—Elizabethton, Tenn. Under the city-manager form of government in operation in the city, all the powers of the board of education are concentrated in the city manager, who performs his duties in compliance with the local city charter. During the three years that the plan has been in operation, the population has grown from 3,000 to 12,000 so that three new school buildings have been erected. The local board of education has accomplished its

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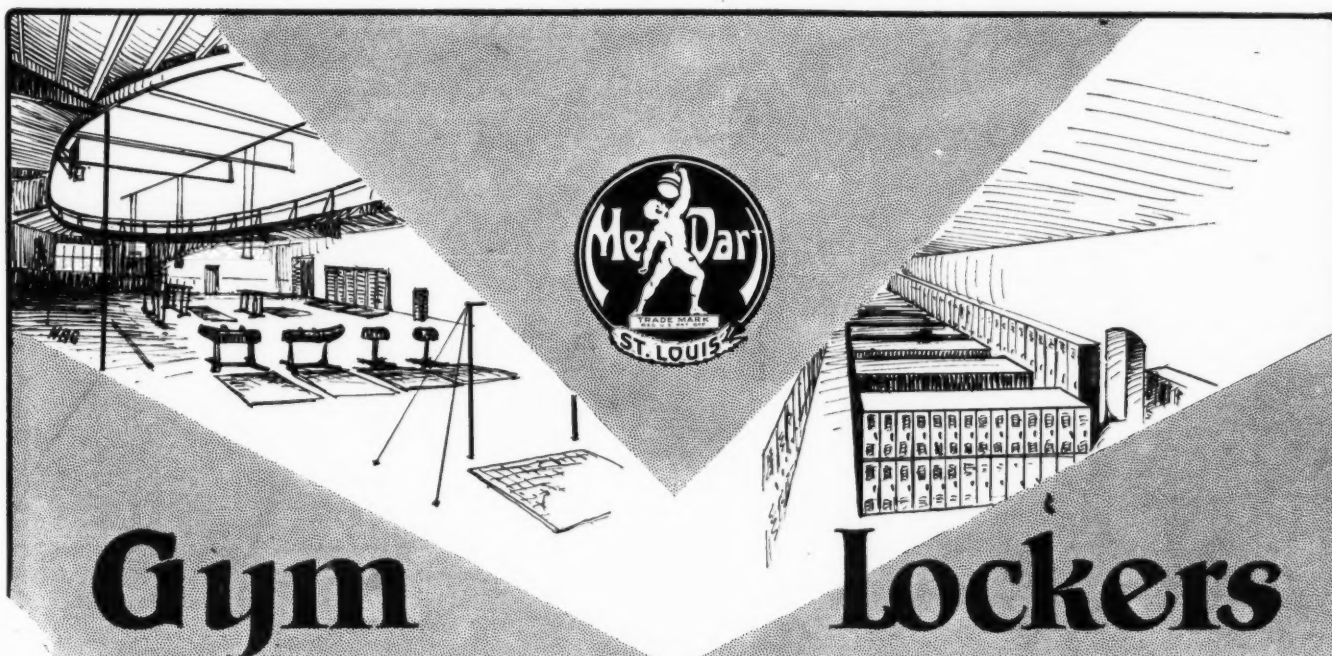
THE WEBSTER MEMORIAL SCHOOL, SUPERIOR, WIS.

This building is fireproof, thoroughly modern, and was constructed at a cost of \$180,000.

It is used by classes in manual training and vocational studies. It contains shops for auto mechanics, cabinet making, wood working, sheet metal work, electric wiring, etc., etc. Two rooms will be devoted to cooking, two for sewing, six for classes in arts and crafts.

Besides an office and reception room, an assembly or study hall, together with five recitation rooms, are provided.

The construction work was under the supervision of P. G. Stratton, chairman of the building committee of the board of education.



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THE gymnasium and locker room combine to form the physical department. Co-ordination means efficiency. Greatest efficiency is obtained when these two units are planned and equipped as one. This is a service offered by the Medart Organization. Makers of both gymnasium apparatus and steel lockers, Medart has fifty-six years of experience on the physical side of education. The Medart experience and the Medart Engineering service are offered to interested institutions without obligation. Send for the Medart catalog of gymnasium apparatus and steel lockers.

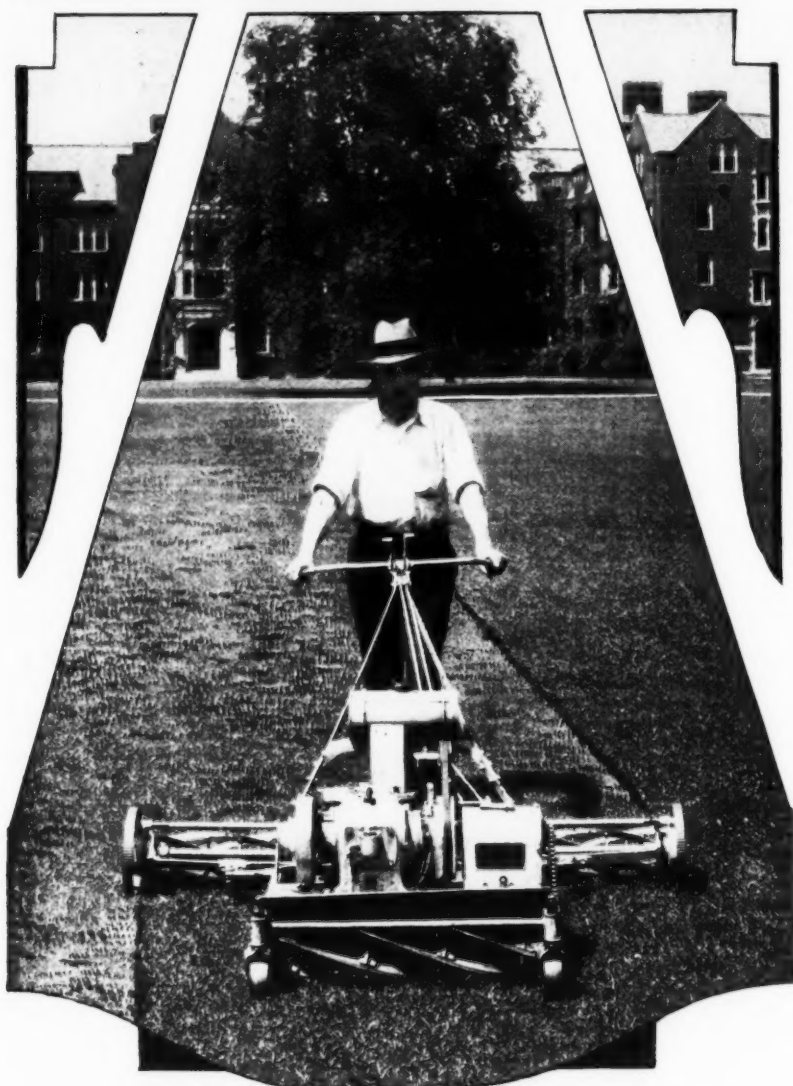
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Makers of Gymnasium Apparatus, Playground Equipment, Steel Lockers, Steel Shelving, Steel Cabinets and the Junior Line for the Home Playground.

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New type of motor lawn mower for schools and colleges

THE staunch dependability of Coldwell Motor Lawn Mowers and Rollers coupled with their economical operation and repair-free service are the factors that are causing public schools, universities and colleges to adopt these machines for their lawn *mowing and rolling* problems.

Machines are adapted for combined mowing and rolling or for separate rolling only on athletic fields, football grounds, baseball diamonds, tennis courts, etc. Maintains these fields in tip-top condition at minimum of labor and expense.

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Children *must* stay on the playground where the boundary is marked by a neat and strong Anchor Playground Fence . . . a friendly barrier, standing ever-vigilant, ready to turn back scampering feet from the dangerous roadway.

Phone the Anchor Fencing Specialist near you—have him show you the reasons for the exceptionally long life of an Anchor Fence. Have your playground properly enclosed.

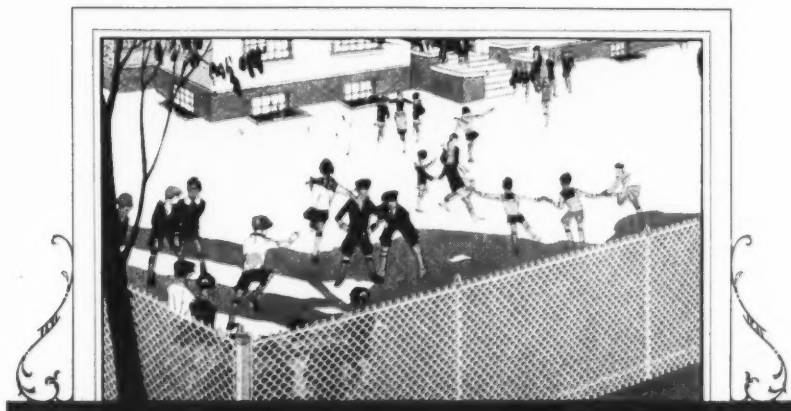
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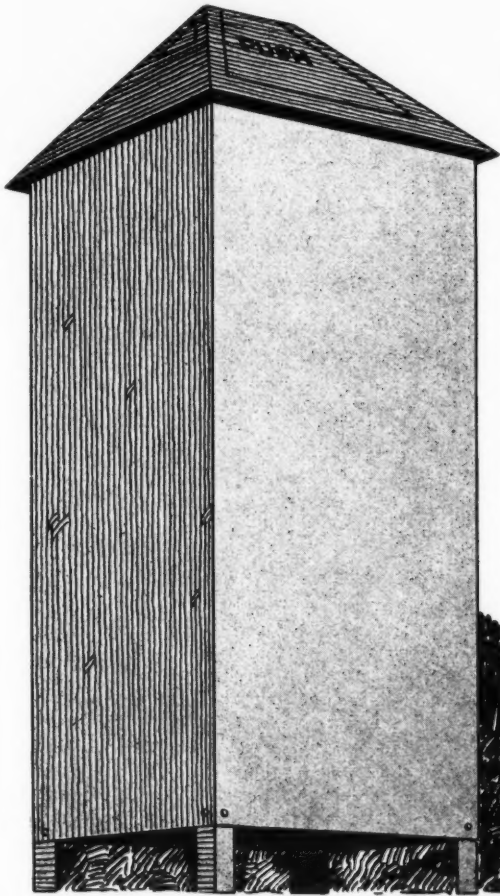
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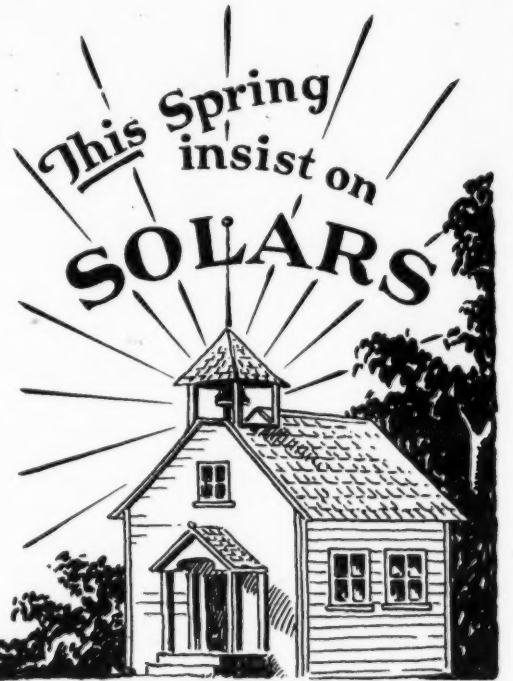
SOLAR Self-Closing RECEPTACLES will keep your buildings and grounds spick and span.

Let's do the job differently this year. Let's get our schools all cleaned up as usual, but let's not stop there. *This* year let's enlist a corps of SOLAR Self-Closing RECEPTACLES to carry on the good work where our annual spring cleaning drive leaves off.

And SOLARS will "carry on," for they compel the children themselves to take an active interest in the appearance of school buildings and grounds.

Station SOLAR Self-Closing RECEPTACLES wherever waste accumulates and notice the change. Notice that children actually go out of their way to deposit waste and refuse within their fascinating, self-closing, gravity-operated covers. Notice that janitors' cleaning tasks are materially lightened, permitting them to spend more time on other work.

Write now for literature outlining the school application of SOLAR Self-Closing RECEPTACLES.



SOLAR-STURGES MANUFACTURING CO.
MELROSE PARK - - - - - ILLINOIS

(Concluded from Page 122)

work under the city-manager form of government, with an entire absence of friction or political animosity.

—Mayor John C. Lodge of Detroit, Mich., in a recent statement on the proposed ten-year improvement program for the city, calls attention to the city's needs for public schools. In commenting on the problem of estimating the school needs, he points out that it is rather difficult to justly estimate an expenditure for the city schools for the next ten years, for the reason that the determining factor of population cannot be accurately figured.

In connection with the problem, Mayor Lodge suggests that the financing of public funds be placed on the pay-as-you-go basis. The city is building schools today for the people of thirty years hence, and is at the same time paying for the schools now being used and those which have been built in years past. However, Mr. Lodge suggests the wisdom of placing school buildings in the tax budget since the school costs of a city of constant growth cannot be questioned. During the past two years, the City of Detroit has issued school bonds, reducing their term from 30 to 25 years, and then to 20 years. A continuation of this policy of reducing the term of bonds is expected to result ultimately in placing school buildings in the tax budget.

A further suggestion made by Mayor Lodge was that a gradually increasing proportion of the capital cost appropriation for schools, say \$500,000 increase annually, be raised by taxation rather than by bond issue. In the opinion of the Mayor, the reduction in terms of the school bond issue would be sufficient for the time being, but would require consideration in the arbitrary imposition of a portion of the school-building budget in the tax levy.

—Ironwood, Mich. The citizens have defeated a proposed bond issue for the remodeling of the northside school building. It was brought out in the pre-election campaign that the people wanted a new building in place of the remodeled structure.

—The citizens of Dist. No. 46, in Watonwan county, Minnesota, recently approved an appropriation of \$45,000 for the building of an addition to the school. The new structure will house the senior high school and a gymnasium-auditorium.

—Union Pier, Mich. The citizens recently defeated a proposition for a bond issue to construct a new school.

—Carrollton, Mo. Bonds in the amount of \$140,000 have been voted for the erection of two new grade schools.

—Mendota, Ill. A new school will be erected at a cost of \$100,000.

—Compton, Calif. The citizens have approved a bond issue of \$180,000 for two new schools.

—The school board of St. Louis Mo., has amended its rules governing the organization of the supply fund and receiving of bids for supplies. The rules as amended, read as follows:

The supply commissioner shall be provided with a revolving contingent fund in the amount of \$1,000; this fund to be drawn by voucher and accounted for in monthly reports to the committee on auditing and supplies.

"This fund may be used for the payment of freight, drayage and express bills, bills requiring payment in advance and in addition thereto bills amounting to \$3 or less. Such payments, when made, to be vouchered against the appropriate accounts of the various departments and the contingent fund reimbursed in the amount of such expenditures.

"All bids shall be deemed final, conclusive, and irrevocable, and no bid shall be subject to correction or amendment for any error or miscalculation. No bid shall be withdrawn prior to the close of the regular meeting of the board of education next succeeding the opening of bids; and violation of this provision, or a failure or refusal upon the part of such bidder to comply with the award made to him, shall forfeit to the board his deposit and render him liable to the board for all damages caused to the board by reason of such breach of obligation.

"Bids for supplies may be invited under the name of the article, when the same has an established name in trade or in conformity with samples selected by the supply commissioner, and open for inspection at the office of the board. Bids shall be made separately or in such groups as determined by the board. Every bid shall be accompanied by the certificate of the secretary and treasurer showing the deposit with him of a certified or cashier's check payable to the board of education of the city of St. Louis in such sum as may be required by the supply commissioner as security for the faithful performance of any contract which may be awarded to the bidder."

—The school board of Easton, Pa., has adopted a report of the educational committee providing for a membership of 40 per cent male members for the faculties of the junior and senior high schools. It was the opinion of the committee that boys of the junior and senior high schools should be under the influence and have the advice of men of mature age to a reasonable extent.

Inasmuch as the number of girls from Easton and the vicinity taking training courses far outnumbers the young men, it would be necessary to obtain some men from other localities. It has seemed wise to adopt the rule in order that the superintendent may be free to seek qualified trained men when necessary, irrespective of their residence.

—The school board of St. Louis, Mo., has announced that it will hereafter take notice of the habitual neglect of financial obligations by school employees and will consider such neglect a proper cause for disciplinary action in accordance with its rules and regulations. The action was taken on the basis that employment in a teaching or other capacity by the board of education is considered a guaranty of business and financial integrity.

—Janesville, Wis. The board of education and the superintendent, with the cooperation of the city council and the city manager, have attacked the problem of adequate and modern housing for the pupils of the graded schools. During the school year 1929 it is the plan of the board to carry out a program of school-building construction which will provide modern and efficient buildings for the school children.

—A contest in the beautification of school grounds is being conducted in the schools of Indiana by the state parent-teacher association and the state federation of art clubs, in cooperation with the extension division of the state university.

The purpose of the contest is to stimulate interest and greater activity in planning and planting school grounds with trees, shrubs, flowers, and vines in order that the schools may be made beauty spots.

—A recent ruling of the state education department of Wisconsin is to the effect that a board of education of a village or city maintaining a high school has not authority to enter into a contract with the principal for a period of more than one year. Under the ruling, a board of education in a city having a city superintendent of schools, may enter into a three-year contract with the superintendent.



VAN CAFETERIA EQUIPMENT
Is at the Head of Its Class
 It passes every examination in economy, appearance and performance with the highest honors. Schools with VAN Cafeterias serve more pupils better, at lower cost and less labor. Our engineers will gladly show you why. Or, if you are planning to discard obsolete units, remember that VAN replacements are FINAL!
 Write for Book Y93 "School Cafeterias."

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 Behind Van Equipment is the most authoritative and widespread engineering organization in the world. You are assured of a scientific plan, an economical arrangement and correct equipment.

The John Van Range Co.
 EQUIPMENT FOR THE PREPARATION AND SERVING OF FOOD
 Cincinnati

CHICAGO—1200 West 35th Street. NEW YORK—38 Cooper Square
 Division of Albert Pick-Barth Company, Inc.

School Hygiene and Sanitation

HEALTH DEPARTMENT REGULATIONS GOVERNING SWIMMING POOLS

In the belief that the condition of the water in the swimming pools conducted in connection with the Cincinnati, Ohio, schools is not all that it should be, the director of physical education, Mr. Carl Ziegler, has called attention to the rules of the health department governing the use and operation of the pools. The rules read as follows:

Health Department Requirements for Swimming Pools

Bacterial Standards

1. Bacterial Count—24 hours incubation at 37° Centigrade. Not more than 10 per cent of samples covering any considerable period shall contain more than 1000 bacteria per cubic centimeter. No single shall contain more than 5000 bacteria per cubic centimeter.

2. B. Coli—Not more than three out of any ten consecutive samples collected on different dates shall show a positive presumptive test. All official samples to be collected by Bureau of Sanitation and analyzed in the Department of Health Laboratories.

Requirements for Operators

1. Clean-appearing pool and water, with no sediment on bottom of pool or particles floating on top. Bottom of pool should be plainly visible in deepest portions.

2. Before first filling and after each subsequent draining of pool, the sides and floors must be thoroughly scrubbed with water and some cleansing preparation such as soap powder to secure cleanliness. This to be followed by scrubbing with water containing chloride of lime—teaspoonful per pail of water—so as to disinfect, kill bacteria in the crevices, etc. This to be followed by a thorough flushing before refilling with fresh city water.

3. Water in pools operated on the "fill and draw" plan (no recirculation of water with filtration and sterilization) shall not be used for more than one week. Where the patronage is large, the pool shall be emptied more frequently—each night, or every other night, or thrice weekly. At least 200

gallons of fresh city water should be allowed per person. The frequency of emptying each pool to be determined by the Bureau of Sanitation, Department of Health.

4. If water in "fill and draw" pools is used longer than 24 hours, it shall be disinfected after each 24 hours' use or oftener if the Bureau of Sanitation, after inspection and studies made, so decides. The use of four to eight ounces of chloride of lime, depending on the size of the pool and the bathing load carried, will usually be sufficient for each disinfection. The Bureau will be glad to advise in each particular case. Several methods of disinfection may be used. The best results will be obtained, however, by making a solution of the chloride of lime and water and stirring the same into the pool. Recirculating pools should be drained and thoroughly cleansed once monthly or oftener on request of the Bureau.

5. No bathing suits shall be used except such as have fast dyes, and all bathing suits and towels used by more than one person shall be washed and sterilized after each use.

Requirements for Bathers

1. No one shall be permitted to enter a swimming pool, who has an infection of the eye, ear, nose, throat, or skin; or who is just recovering from a communicable disease; or who is not apparently well.

2. A cleansing bath (preferably in the nude) with soap and water and use of toilets are required before entering the pool.

3. Pollution of the pool with body discharges is strictly forbidden.

HYGIENE AND SANITATION

—Sterling, Ill. The school board has authorized the appointment of a school nurse for the school year 1929-30.

—The second health center for the correction of physical defects in Chicago school children has been announced recently by Health Commissioner Arnold H. Kegel. It is expected that a total of forty divisions will be established in connection with the health campaign.

Records are kept of the children's physical examinations and of the improvements obtained through the attention of the family physicians, or of charity clinics in the cases of poor families. Improvement of scholastic ability is expected to result with the improvement in health. Children from both public and parochial schools are given attention at the centers.

—The health of school children and its relation to backwardness in pupils was the subject of a conference of school officials, social workers, and city health department staffs held at the Kinzie School, with Health Commissioner A. H. Kegel presiding. An inspection of school children on the north side revealed 9,000 children suffering from physical defects who were in immediate need of attention.

—Public Health Bulletin No. 181, recently issued by the surgeon general of the U. S. Public Health Service, gives the findings in a study of the relationship of illumination to ocular efficiency and ocular fatigue among the letter separators in the Chicago post office.

The study which covered the period from 1924 to 1926, seeks to determine the degree of illumination under which the distribution of mail might be done with the greatest ease and efficiency, and to demonstrate the relation of ocular fatigue to different degrees of illumination.

Early in the study it was found that not only the intensity of illumination but also the amount of mail to be sorted and the mental attitude of the worker affected the speed of sorting. The tests showed a marked relation of speed of sorting to degree of illumination, the looking time, or the approximate time required to read the addresses on the cards, decreasing about 8 per cent when the illumination was increased from 2.5 to 10 foot-candles.

In an attempt to find the effect of the degree of illumination upon ocular fatigue, a special piece of apparatus was designed in which a broken circle was exposed as a test object for 0.011 of a second, and the subject was required to tell the direction of the break in the circle. A test was made shortly after beginning work in the morning, and again shortly before stopping work in the afternoon. It was noted that snap acuity was slightly lower at the close of the day's work than at the beginning, and that it improved after the subject had worked under high illumination for a sufficient length of time, and decreased after working under low illumination.

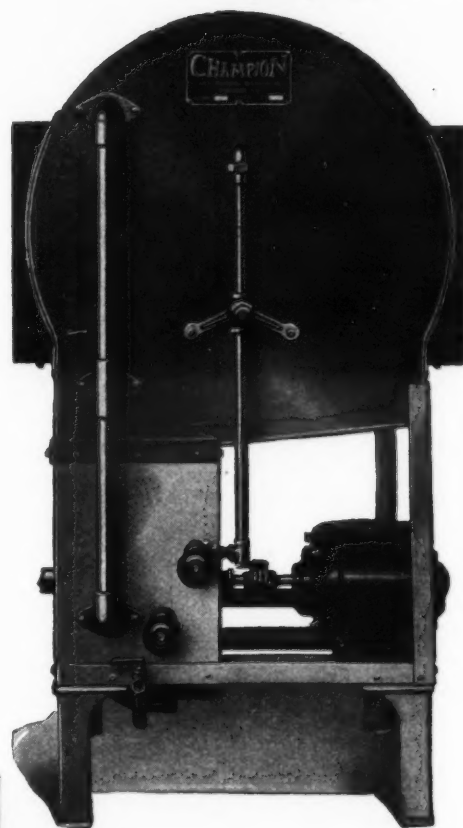
All Sizes!



Model 1—Single tank, basket type machine for hand feed. Capacity 3,000 to 4,000 pieces per hour.

NO MATTER how great or limited the needs of a kitchen, there is a Champion model adaptable to the conditions. There are, in all, 9 different types of Champion Dish Washers. These start with a capacity of 1500 pieces per hour and a price of \$290, and go upward to 21,000 pieces per hour capacity. Each model embodies the sterling principles of Champion construction—simplicity, strength, accessibility of working parts. Economy is readily realized because there is no lost motion.

May we not submit facts and figures showing how Champion, applied to *your* dish washing operations, will pay for itself in actual savings effected? Coupon brings descriptive literature.



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MACHINE CO.
HOBOKEN, NEW JERSEY
 Chicago Office, 228 N. La Salle Street

Champion Dish Washing Machine Co., Dept. 724
 15th & Bloomfield Sts., Hoboken, N. J.

Please send literature describing Champion Dish Washing Machines.

Name

Address



WHEN CAR-NA-VAR IS USED YOUR FLOORS RECEIVE A HARD TRANSPARENT FILM OF PROTECTION WHICH KEEPS WEAR, DIRT AND STAINS FROM THE FLOOR SURFACE. FURNITURE MARKS, SCRATCHES OR DISCOLORATIONS CANNOT RUIN THE BEAUTY OF A CAR-NA-VAR PROTECTED FLOOR SURFACE.



Easily applied with a mop. Dries in one hour. Quickly cleaned with a damp cloth.

... and CAR-NA-VAR will cut the overhead under your feet. LESS THAN 1¢ PER SQUARE FOOT PER YEAR IS THE ACTUAL MATERIAL MAINTENANCE COST.

CAR-NA-VAR is a COMBINATION of liquid floor wax and varnish gums. The wax content gives pliability, thus preventing checking or cracking. The varnish contributes long wear and a lustrous finish.

The nearest Branch Office will gladly demonstrate—or a direct inquiry to the Home Office will bring literature.



Shipped in convenient drums or cans. Always identify genuine CAR-NA-VAR by the bright yellow drum and red trade-mark.

CONTINENTAL CHEMICAL CORPORATION
WATSEKA 219 SCOTT STREET ILLINOIS
BRANCH OFFICES AND WAREHOUSE STOCKS FROM COAST TO COAST AND IN CANADA

THE DEPARTMENT OF SUPERINTENDENCE AT CLEVELAND

(Continued from Page 62)

most deplorable state. Our murder record is vastly higher than that of any European country. Among the most difficult problems with which we have to contend are (a) the mobility of population which breaks down inhibitions, (b) low standards of various racial and local groups which differ radically from one another, (c) disrespect of the law which has been growing, (d) our enormous prosperity, (e) the colossal increase in divorcees. Education, he concluded, must solve all these problems for the welfare of the country. He stopped just short, however, of suggesting a compelling motive which might serve as a basic educational consideration.

Dr. John J. Tigert, who concluded the program, did not seem to quite express his ideas of moral education completely. Perhaps he best indicated his regard of the need of religion in a program of character development by the quotation from Amiel, with which he closed:

"Christianity brings and preaches salvation by the conversion of the will, humanism by the emancipation of the mind. One attacks the heart, the other the brain. Both wish to enable man to reach his ideal. But the ideal differs, if not by its content, at least by the disposition of its content, by the predominance and sovereignty given to this for that inner power. For one, the mind is an organ of the soul; for the other, the soul is an inferior state of the mind; the one wishes to enlighten by making better; the other to make better by enlightening. It is the difference between Socrates and Jesus."

The Resolutions

The resolutions repeated in large part the principles expressed by the Department on former occasions. Perhaps, however, the following paragraphs represent a development in the viewpoint of the superintendents:

We renew our pledges to secure better support for rural schools through our advocacy of larger units of financial support, to the end that the country child and his parents may fully enjoy that equality of educational opportunity which is our national boast.

If the Nation's purpose is to be realized, and if the teaching profession is to profit through the improved techniques developed by a notable increase of scientific

educational research, a higher degree of professional skill than is now common will be required. We pledge ourselves to continued alertness in professional study; to more effective provision for the training of teachers in service; to demanding better preparation before the appointment of teachers, and to more drastic dismissals of those who fail to give adequate attention to improving their usefulness.

We continue our indorsement of intelligent legislation aiming at the liberation of children from the stunting effects of severe labor. The main and real purpose of public education cannot be realized, unless all children are kept out of industry so long as school is more profitable to the Nation than is their presence in the factory, mine or store. We insist that adequate provision be made by the schools to insure through varied curriculum equal opportunity to all children.

We compliment and commend the parent-teacher associations for their increasing attention to the problems of public education. We shall encourage reasonable participation in their activities by public-school workers and shall assure them of our cooperation in their efforts for the good of all children.

By sad experience, we know that too much dispersion of effort impairs the value of school service. Success in school depends largely upon plans made well in advance of action. We pledge ourselves once more to persuade our communities to abstain from using or misusing the schools for the collection of money from children; for the celebration of the numerous special weeks and special days, and other similar interruptions other than those approved by school boards and superintendents at least a year in advance. We recommend that solicitors for replies to questionnaires be referred to the research department of the National Education Association—an obligation to which superintendents may consider themselves bound by the passage of this resolution.

We urge upon every community an honest study of its school budget. We remind those whom we serve that the average emolument of physicians, lawyers, architects, of all those persons in charge of interests no more precious than those in our care, is higher than formerly and is not being reduced. We condemn the attacks made upon school costs by uninformed persons whose intentions are good, by informed persons whose intentions are bad, and by paid objectors who are concerned with their own fine salaries rather than with the good of the state. We believe that expenditure for public education is recognized by the best minds of the day as the most generally profitable investment the Nation can make. We hold that failure to pay good wages for educational service is failing in securing the best results.

We reiterate our belief that the public schools shall offer no lodgement for literature of the propaganda type, nor any encouragement to the speakers who have propaganda to spread through contacts with school children. We pledge ourselves to protect our schools against the insidious wiles of all agencies which seek to serve private ends through the misuse of school publicity.

We endorse present legislation restricting the flood of unassimilable immigration, whose only effect is to lower American standard of living, American wage rates, and American ideals. We pledge our support to any legislation having for its object the maintenance or a thoroughly restricted immigration, and a close enforcement of such restrictions.

We desire to express to the good people of Cleveland, to its municipal administration, and especially to Supt. R. G. Jones and his coworkers in the schools of the city, our appreciation of their endeavors to make of this convention a successful event, and to convey to all of them our heartiest thanks for their assistance.

We record our satisfaction with the work of our officers, committee, and permanent staff, who have conducted the business of the department with fidelity, intelligence, and efficiency. Especially do we urge and commend the continuance of studies having for their object the elimination of waste in school procedure, the instruction of more successful methods of teaching, and the realization of the important aims embodied in these resolutions.

The Business Session

The Department of Superintendence has always conducted its business according to ideals which every superintendent would like to have his board of education accept. In other words, it adopted every recommendation of its executive officers without question.

Supt. R. J. Condon reported that progress is being made in the collection of a million-dollar fund for research in school administration. Supt. M. G. Clark indicated that he is carrying on a continuous study of the proper relations between the Department and such lay organizations as the Red Cross, etc.

The election of officers took place without contest. Supt. Hartwell's nomination of Supt. Frank Cody of Detroit for the presidency aroused the enthusiasm which Mr. Cody's personality and service so richly deserve. Mr. F. D. Boynton of Ithaca, becomes ex officio vice-president of the association. Supt. N. C. Crozier of Dallas, was elected second vice-president, and Supt. David E. Weglein of Baltimore, was made a member of the executive committee. Although Secretary Shankland was confined to a room of the Cleveland Hotel by a distressing attack of influenza, the business of the Department was handled with the greatest expedition and efficiency. The registration of actual memberships amounted to 3,680 members of the Department and better than 8,000 members of the National Education Association.

The exhibits were managed in a masterful way by Mr. H. A. Allan, business manager of the Association. Altogether there were 260 distinct displays

(Concluded on Page 130)

Hospitals from Coast to Coast standardize on VULCAN RANGES

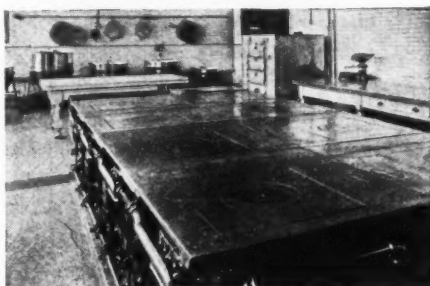
Read what the Superintendent of St. Luke's (New York) says on Vulcan cooking equipment... which explains why hospitals are adopting Vulcan as standard.



St. Luke's Hospital overlooking Morningside Drive, New York City.

St. Luke's Hospital, one of the finest institutions in the world, with unlimited resources for equipment, has placed the seal of its approval on Vulcan cooking equipment in no uncertain terms, in the letter from Supt. George F. Clover, reproduced above.

Kitchen of the Royal Victoria Hospital, Montreal, showing installation of eight Vulcan "Hot-Top" ranges, regarding which Paul DuBois, the chef, expresses his "entire satisfaction".



St. Luke's Hospital

CATHEDRAL HEIGHTS
AMSTERDAM AVENUE AND 113TH ST.

New York, Feb. 21, 1929

Standard Gas Equipment Corporation
18 East 41st Street
New York

Gentlemen:

The Vulcan gas ranges which you installed in our main kitchen several years ago have given us such satisfaction that in specifying the ranges to be used in our new private patients' building we would not consider the installation of ranges other than the Vulcan and, accordingly, Vulcan ranges and bake ovens have been installed in such kitchen.

Yours very truly,

Geo. F. Clover

Geo. F. Clover
Superintendent



St. Joseph's Hospital, Milwaukee, which has an installation of three Vulcan "Hot-Top" ranges, broiler and other equipment.

Hospitals and institutions seek the finest kitchen equipment. Many are replacing coal ranges and old type gas ranges with Vulcan "Hot-Top" gas ranges, and a large proportion of new construction contains Vulcan cooking equipment from the start.

Jewish Hospital, St. Louis, Missouri, in which are installed "Hot-Top" ranges and other equipment.



What is VULCAN?

Vulcan is an improved type of heavy duty gas range used universally.

Why VULCAN for Hospitals?

1. Vulcans give greater cooking capacity in small space.
2. Vulcans have low fuel cost.
3. Vulcans have low up-keep cost.

An outstanding feature of Vulcan ranges is the all-hot-top which gives great flexibility... tremendous speed... low economical heat for slow-cooking.

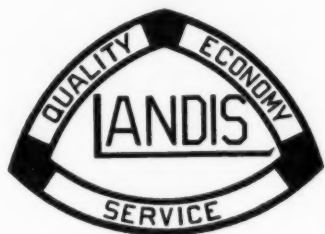
When leading hospitals and institutions from coast to coast, as a result of satisfactory operating experience, install Vulcan after Vulcan, isn't it worth your while to send for the Vulcan book on cooking equipment?

Hotel Dept., Standard Gas Equipment Corp., 18 East 41st Street, New York. Pacific Coast Distributor: Northwest Gas & Electric Equipment Co., Portland, San Francisco, Los Angeles... Makers of Smoothtop Gas Ranges, Oriole, Acorn and Vulcan Ranges

Among thousands of users of VULCAN cooking equipment are:

Columbia University
De Witt Clinton High School
Franklin High School
Pratt Institute
George Washington High School





LANDIS ELECTRIC TIME AND PROGRAM CLOCK SYSTEMS

An Automatic System that takes care of the various changes of schedule for the different days of the week - - -

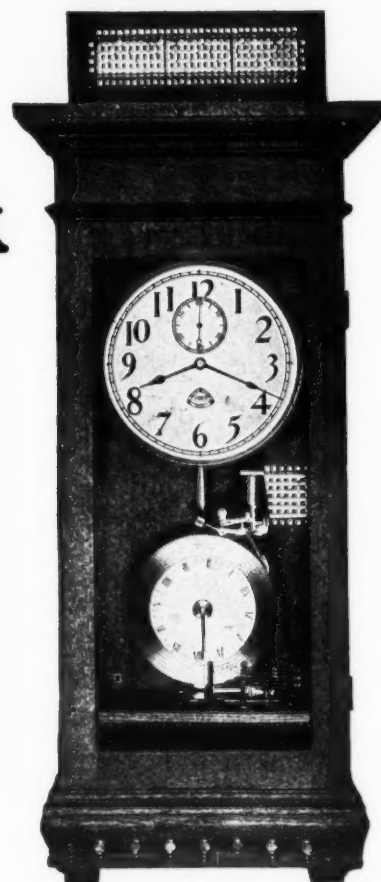
The Landis System provides a line that represents simplicity in construction, accurate mechanical and electrical design, and a system that is long lived and economical in operation.

Allow us to submit specifications covering the individual requirements of each specific installation. Our detailed layout makes it possible to have your equipment installed in a first class manner.

Send us an outline and we will gladly send you a figure on your proposed installation.

LANDIS ENGINEERING & MFG., Co.

Waynesboro, Pennsylvania



(Concluded from Page 128)

in the annex of the Public Hall. These ranged from school desks and schoolbooks to school busses and school heating apparatus, and gave the schoolmen of the country an opportunity of seeing in a most convenient way the best and latest in school equipment and teaching materials. It was noticeable that the firms who are displaying are, from year to year, sending a better type of salesman, in many cases sales engineers. These men are using the opportunity, not of spreading cheap sales gush, but of spreading dignified basic information from the scientific and teaching standpoints. On the part of the superintendents there seems to be also growing appreciation that it is impossible to keep up with professional progress without examining new productions in supplies, teaching materials, books, apparatus, etc. Practically every new item offered for school use is today the result of scientific research in colleges, industrial laboratories, or schools and, as someone has well said, is the translation of the newest in theory into practical utility.

MR. ITTNER RECEIVES TESTIMONIAL

Mr. and Mrs. William B. Ittner of St. Louis received during the convention an interesting testimonial of appreciation from superintendents and other school authorities who have utilized the Ittner school-architecture service. A beautiful bronze mantel clock was presented to Mr. and Mrs. Ittner on the occasion of the thirtieth anniversary of Mr. Ittner's entry into the field of school architecture. The presentation was made at the annual Ittner dinner at the Hollenden Hotel.

THE HICK SUPERINTENDENT

(Continued from Page 62)

When I went back to my room I began to use my head and later in the day I asked one of the maids if she knew who was the real boss down in the office and she said that the little man with the little mustache was. Next time I was in the lobby I filled my pockets with cigars and worked my way over to the desk and visited with the man she described and passed him a cigar. After that every time I went in or out I kept him supplied with smokes.

Tuesday morning when I was about ready to move out I asked the head man about getting an-

other room to take the place of the one I was vacating and he told me they had made a change in their plans and I could remain just where I was. So I decided that by using my head I had gotten for half a dozen cigars what I would have paid a dollar a day for if the young fellow had only taken me up on my first offer.

The program this year wasn't as good as it was a year ago, and many of the addresses reminded one of "twice told tales." Especially was this true of many of the sectional meetings where one got the impression that speakers were satisfied with seeing their names on the printed program and didn't try to prepare a worth-while paper for the benefit of their audience.

I kind of thought that when President Boynton in his opening address talked about "birth control artists, and discredited judges, and such things" he was thinking of a front-page headline in the evening papers, just like he got in Boston when he walloped President Lowell. But when he said "Neagra" for "Niagra" that was too much like Al Smith's "raddio."

However, taken as a whole there was a lot of truth in President Boynton's address and it was one of the high spots of the convention. He is right in saying that it is not the working man living in a small rented home, striving to support a large family on a small income, and struggling against the approaching day when his older children must give up school and join the ranks of the wage earner, that bewails the high cost of public education. "It is that small, but powerful and active class, made up in part of those who believe apparently that education above the line of illiteracy, is the exclusive right of a few select souls and who claim it for their own by a sort of divine right bestowed by heredity and wealth, forgetting that they themselves and their prestige are the product of that democracy which they now desire to strangle; a class made up in part of these, and in part, also, of those gold-greedy go-getters who have always been willing to rob childhood of its birthright and to coin it into coupons, in order that, with unconscious irony, they may build monuments to themselves upon college campuses."

I wish you could have seen the exhibition of physical and health education in the public auditorium Tuesday evening. Several thousand children from all grades and schools in the city gathered on the floor of that great building and presented one of the most stirring programs ever staged under one roof in this country. Heralds, band drills, mixed dances, marching drills and games, pyramids, sports, community-center activities, and Virginia reels were demonstrated in a manner that was almost ideal. The technique of carrying out such a mass production was perfect, and there was not a child in that vast multitude but knew just where his place was and when his part began.

If I got nothing else out of the convention, this exhibition was worth the cost of the trip.

But, there were other fine things at the convention. Take the commercial exhibits for example. They were more numerous and better than ever, and the superintendent who took the time to study what each exhibitor had to offer brought home ideas which he could not otherwise possibly have gotten. Publishers and supply distributors are educators of the first rank and it is too bad they are not given more recognition for the work they perform. It is they who translate the results of research workers into terms of practicability. A study of correct sitting posture would amount to very little if the furniture men did not manufacture seats and desks which conformed to the new knowledge thus obtained. And when publishers and distributors advertise in school publications, they are frequently disseminating knowledge more valuable than is to be found in some of the paid articles appearing in the same journal.

I agreed with Dean William F. Russell of Teachers College, when he said on Thursday morning that character education will show better results when schools have more control over other than school hours. In this respect he pointed out private schools have an advantage over public schools for they have the pupils under their influence for 24 hours every day. Pupils, he said, get schooling inside the classroom, and education outside. Quoting from Tom Brown's Schooldays Dean Russell said,

(Concluded on Page 133)

For ALL School Storage NEEDS

STEEL
SHELVINGBASKET
RACKSSTEEL
LOCKERS

LYON STEEL LOCKERS, of one type or another, in one of their various finishes, will meet any locker need in corridor or gymnasium locker room. Lyon Steel Lockers are rigid, strong and—with the recent addition of rubber cushions for the doors—quieter than ever... In athletic departments, Lyon Steel Shelving will provide lasting and convenient storage facilities. Lyon Basket Racks make it possible for one locker to be used by several students. Thus they are an economy—

if that is necessary—in gymnasium equipment... Lyon Steel Cabinets, strong, fine in line and beautifully finished, answer every office storage need—for principal, teacher, athletic director... In equipping your school with storage facilities you are offered the services of Lyon men with experience in fitting schools, from coast to coast, with Lyon Products... Write us about your plans and let us send you complete information on Lyon Service and Lyon Products.

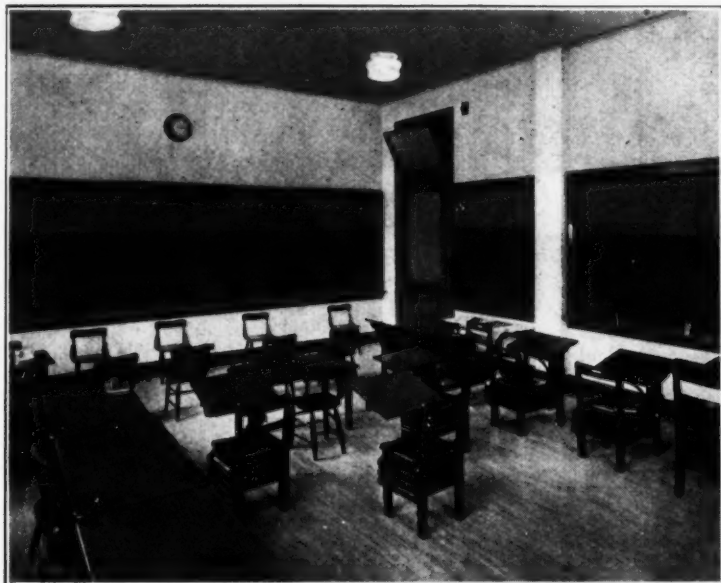
SHELVING LOCKERS
CABINETS COUNTERS
STEELART FOLDING TABLES
AND CHAIRS
BASKET RACKS

**LYON METAL
PRODUCTS, INCORPORATED**
Aurora, Illinois

Successor to
Burand Steel Locker Co. Lyon Metallic Mfg. Co.
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STEEL STORAGE EQUIPMENT



Do You "Shop Around" for Slate?

Slate is specified and bought for its uniformity of color, quality and price. Then why buy your Slate from several different sources, and increase the possibility of variation, error, delay and dissatisfaction?

Buy All Your Slate From a Single Source!

And—let the source be Pennsylvania Structural Slate Company. Our Slate is quarried, worked, finished and shipped by a single organization. Our Service is as uniformly good as the Slate itself. Don't shop around—consult us!

**Pennsylvania
Structural Slate Company**
First National Bank Bldg. Easton Penna.

2 informative booklets
are yours for
the asking.



**Clip and
Mail
Coupon —**

PENNSYLVANIA STRUCTURAL SLATE CO., Easton, Pa.
(check square for information desired)

- ☐ Please quote on.....square feet of Pennsylvania Structural Slate Blackboards, delivered to address below.
- ☐ Please quote on.....square feet of Eureka Cork Bulletin Board, delivered to address below.
- ☐ Please send specifications and setting instructions for Blackboards and Bulletin Boards.
- ☐ Plans are being forwarded for quotation on.....job.

Name.....
Address.....City and State.....
☐ Please send Catalog B on other Slate products.



THE Sani Table No. 314 with seats attached is ideal. Note how the stools swing from the table. No chairs to move when cleaning. Everything remains neat in its place.

Attractively finished in japan or white enamel paint, with wood seats. Cast iron bases, heavy, strong and rigid, insure unlimited service. Tops are furnished in Sani Onyx, molded rubber or linoleum.

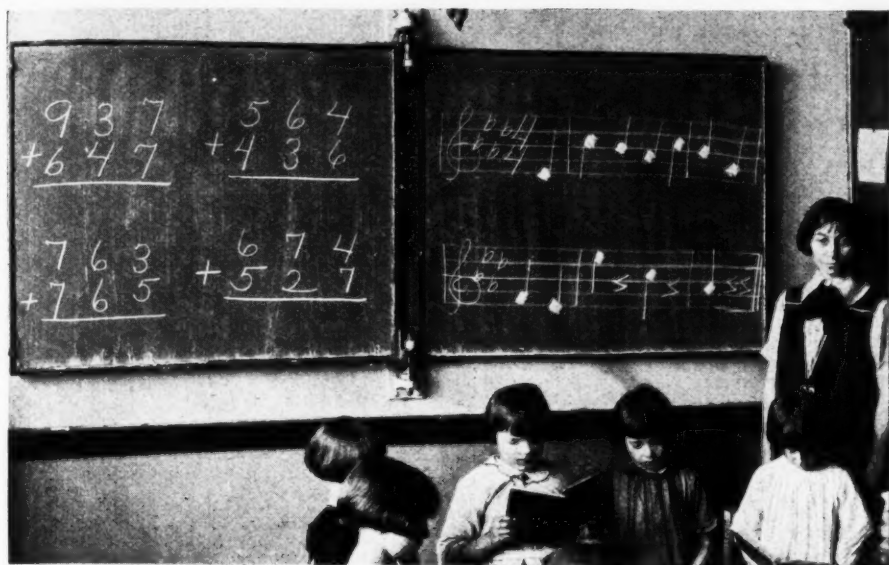
*Write to know more
about this unusual
table, No. 314*

**SANI PRODUCTS
COMPANY**

No. Chicago, Ill.

*Selling Organization
for
Chicago Hardware
Foundry Co.*

**Sani
Products**



Many teachers try in vain to discipline a group of fidgety nervous children, never realizing that the children are not to blame. Very often when they are squirming in their seats, putting their heads down on their desks, when they

should be paying attention, they are fatigued by eyestrain and headache which has come from looking at a glaring blackboard which is across the entire front of the school room.

"I Couldn't Keep Them Still . . . until our School Board Installed the Alternator!"

The New Alternator Makes Such a Difference

Teachers everywhere are delighted with the Alternator . . . and find its giant leaves work like magic. The alternator is an eight-page book of blackboards, each leaf 42 by 36 inches in size. By merely giving it a gentle push, it will move to any position and the boards will stand in place at any angle where stopped. The Alternator gives the teacher 84 square feet of blackboard space . . . more than the equivalent of a board stretching entirely across the front of the ordinary school room.

The Alternator can be locked . . . so the teacher can have lessons or examinations ready in advance and yet keep them secret. It saves the teacher's school room time, too. It makes it possible to preserve for exhibition, the best work of pupils . . . and to preserve her own lessons from day to day. Yet the cost is amazingly low. Install the Alternator in new or old buildings. There is a special type for each purpose.

Send for the Catalogue A-3 which gives complete information.

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Kansas City,
Missouri

(Concluded from Page 130)

"When Tom Brown was leaving home for Rugby the squire was perplexed as to what sort of a final advice to give him. Meditating, his thoughts ran as follows:

"I won't tell him to read his Bible and love and serve God; If he don't do that for his mother's sake and teaching, he won't for mine. Shall I go into the sort of temptations he'll meet with? No, I can't do that. It will never do for an old fellow to go into such things with a boy. He won't understand me. Do him more harm than good, ten to one. Shall I tell him to mind his work, and say he's sent to school to make himself a good scholar? Well, but he isn't sent to school for that—at any rate, not for that mainly. I don't care a straw for Greek particles or the digamma; no more does his mother. What is he sent to school for? Well, partly because he wanted so to go. If he'll turn out a brave, helpful, truth-telling Englishman, and a gentleman, and a Christian, that's all I want."

"If the schools of America will turn out brave, helpful, truth-telling Americans, gentlemen, and true Christians, what more can we as parents and taxpayers ask?"

And Professor William C. Bagley when he spoke on "Handicaps of Character Education in the United States" surely touched on some sore spots. He pointed out that present-day crime tendencies were apparent back in 1910 and cannot be traced to influences emanating from the 18th amendment. Respect for law is confusing today partly because of different attitudes various states take on the same question. In one state it is a matter of recreation to obtain a divorce. In another it is more or less a disgrace. In one state a widow is sent to jail for life for bootlegging, while in another a bootlegger who cold-bloodedly murders his wife is acquitted while the jury weeps. When such conflicting conditions as these exist, is it strange that our young people find it hard to know the right from the wrong?

Superintendent Ernest C. Hartwell of Buffalo, and Charles Meek of Toledo, read strong papers on teacher training. Superintendent Hartwell said

there is a greater demand today for Phd's than for men with skill in teaching. The problem of elementary teaching is not going to be solved by merely extending the length of teacher training. Success cannot be measured by degrees, although it is easier to pay for degrees than for good work. Superintendent Meek said we educate lawyers and doctors, but we train teachers and monkeys, and that traces of a liberal arts degree is no better equipment for teaching than it is for the practice of law or medicine.

But why go on? There were several score excellent papers which space will not permit mentioning. The rural department put on a fine program and elected Dr. Mabel Carney of Teachers College as president, so that organization now is sure to take on new life once more.

The big social event of the week was the exhibitors' banquet and even though the tickets were three dollars they were cheap. Edgar Guest was the chief speaker and as usual he was good. And while the exhibitors were dining, over in another hotel, the educational publishers were holding their annual banquet with Ted Robinson of the Cleveland Plaindealer as speaker.

I didn't see or smell the indications of a drop of liquor during the entire convention, but I heard one bellboy say to another, "These guys are not like the ones at the convention that was here last week. Those guys just drank all the time. These fellows eat three meals a day besides."

I almost forgot to tell you that I did finally run across some of the Massachusetts boys I met in Boston and they told me that the New England superintendents chartered five special cars, started two days early because of Washington's birthday coming just at that time. They went to Charlottesville, Va., where they were the guests of the University of Virginia and were entertained at Monticello. On the return trip they were invited to spend a day at Harrisburg, Pa., as guests of the Pennsylvania State Chamber of Commerce and the Department of Education. Since I got home, Everett Ireland, superintendent of schools in Stratford, Conn., wrote and told me they had a great return trip and that he and my friend Harmon played

bridge all the way from New Haven to Boston. But he didn't say who won.

Just one more word and I will close. They have the greatest taxis in Cleveland. Five of us rode from the hotel to the auditorium for a dime, a total cost of two cents each. That's my idea of an ideal taxi system.

After the first day your Bruce's Attendance Bulletin proved a life-saver, but I think the printer must be bum at spelling. I took the list and checked off people I wanted to see, and then got a seat in the hotel lobby, and waited until they passed my way. And believe it or not, I am telling you the truth when I say that every single person I had marked, sooner or later passed through the lobby of the Cleveland and I saw him. Next to your Bulletin Dixon's and Faber's pencil booths seemed to be crowded all the time, with the furniture dealers a close third.

I haven't begun to tell you all, but I guess I have written enough to convince you that I was there and that is the important part,

Yours for happy rural schools,
Rusticus.

IMPROVING INSTRUCTION THROUGH TEACHER VISITATION AND CONFERENCES

E. W. Ireland, Superintendent of Schools,
Stratford, Conn.

The chief task of the superintendent of schools is to improve instruction through teacher visitation and conference. So important is this phase of the superintendent's work that fully half of his time should be devoted to it. The teaching situation is a complex and constantly changing one and all teachers, regardless of previous professional training, need to grow in power of self-analysis and in ability to understand, interpret, and evaluate concrete situations in terms of sound pedagogical principles.

To accomplish this purpose, the superintendent, through the setting up of supervisory objectives, should limit his activities to the solution of one problem at a time thus focusing the attention, stimulating the interest, and securing the co-operation and participation of pupils, teachers and supervisors in the achievement of a measurable goal.

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natatoriums and other rooms.

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The successful supervisor needs:

1. Knowledge of the scientific principles underlying the activity observed
2. Practice in recognizing and applying these principles to concrete situations
3. Ability to gather accurate observation data and analyze the same into simple terms
4. Experience in applying the laws of learning in helping teachers become conscious of inefficient procedures, and in stimulating them to put forth the necessary effort to secure improvement through growth in power to adjust means to ends.

The final test of instructional supervision is not merely the desire on the part of the teacher to improve, or the knowledge of how to improve, but the satisfaction and stimulus to new effort that comes from consciousness of actual improvement resulting from modification of teaching and learning situations.

TO WHAT EXTENT ARE EMPLOYERS RESPONSIBLE FOR THE SUCCESS OR FAILURE OF THE YOUNG TEACHER?

John B. Heffelfinger, Superintendent of Schools, Newton, Kans.

The failure of the young teacher, aside from failure due to native disability, must be assessed both against the school wherein she has had her training and against the school system in which she does her early teaching.

Investigations in the field of elementary education assign as follows the six most common causes of failure: (1) weakness in discipline, (2) lack of judgment or tact, (3) poor instruction involving poor methods, (4) insufficient daily preparation involving lack of interest and lack of industry, (5) lack of sympathy, and (6) inability to cooperate. Five of these six major causes of failure are weaknesses in personality traits. The charge against teacher-training schools today must be the nonrecognition of these weaknesses in prospective teachers, or their nonelimination before certification. Certainly it is only reasonable to expect teacher's colleges to give us much time and attention to trait-evaluation and to trait development as is now given to methods of instruction and a knowledge of subject matter.

Granting, however, an ideal situation wherein young teachers begin their work with proved preferences for and tendencies set toward forcefulness, tact, industry, perseverance, sympathy, and co-

operation, employers yet have grave responsibilities. Employers, (i. e. the board of education in the legal sense, and the administrative and supervisory staff in an actual sense) may be culpable in two respects,—

- (1) Unwillingness to supervise and train inexperienced teachers, to help them grow in the only place they can grow—in service, or
- (2) Failure to recognize how essential proper direction is to the young teacher and consequently giving her a supervision negligible in amount and superficial in quality.

A STUDY OF THE PAY-AS-YOU-GO PLAN FOR NEW SCHOOL BUILDINGS

C. F. Hedges, Superintendent of Schools, Neenah, Wis.

The problem as to what extent cities are paying for new school buildings as they build them is important, said C. F. Hedges, superintendent of public schools at Neenah, Wis., in a talk before superintendents of cities with a population of less than 10,000. The excess of expenditures over revenue for public education in the United States was 305 per cent greater in 1920 than 1910. Many communities, when confronted with the method of financing a building program, are influenced by common practice.

A study made of the extent of the use of the pay-as-you-go plan in 133 cities of varying population and of widely scattered location over the United States, shows that during the last ten years of the total amount expended for new public-school buildings, approximately 16 per cent was financed by the pay-as-you-go plan, and 84 per cent by other methods, chiefly by bond issues.

There is little relation between the size of a city and the per cent of school expenditures for new buildings that are borne by bond issues. Thus 48 cities of a population from 10,000 to 30,000 spent during the last ten years a total of about \$29,752,000 for new public-school buildings. Of this sum 28.15 per cent was paid by direct tax. By way of comparison, five cities of a population of 500,000 and over, expended \$120,497,000, of which 26.13 per cent was provided by direct tax. In general, for the 133 cities studied there was a variation from 3 per cent to 28 per cent in the amounts of money raised by direct taxation for new school buildings during the last ten years.

Any community that attempts to plan its financial policy with reference to new school buildings

by observing the practice in nearby cities is likely to be misled in thinking that the observed practice is a general one. There is need for a comprehensive study of this subject in all of its phases.

THE STATE'S PART IN FINANCING EDUCATION

H. H. Davis, Auditor of the State Department of Education, Columbus, Ohio

One of the most significant trends in modern school finance is the increasing degree to which the state is assuming the cost of education. The steady gain in mobility of population has emphasized the fact that the children of one community today are in many cases the citizens of some other community tomorrow. Also the rapid concentration of wealth in small areas has increased the disparity of financial ability as between various sections of the state.

The state may aid in financing the schools under one or more of three general policies.

A. It may stimulate local effort through granting a subsidy for special work.

B. It may use the subsidy as a tool of administration, through refusing grants to all schools which fail to maintain a certain standard of building, equipment, teachers, etc.

C. It may demand a minimum standard from all schools and then provide the money needed to supplement the local revenues in providing this minimum.

Ohio is operating on the third plan.

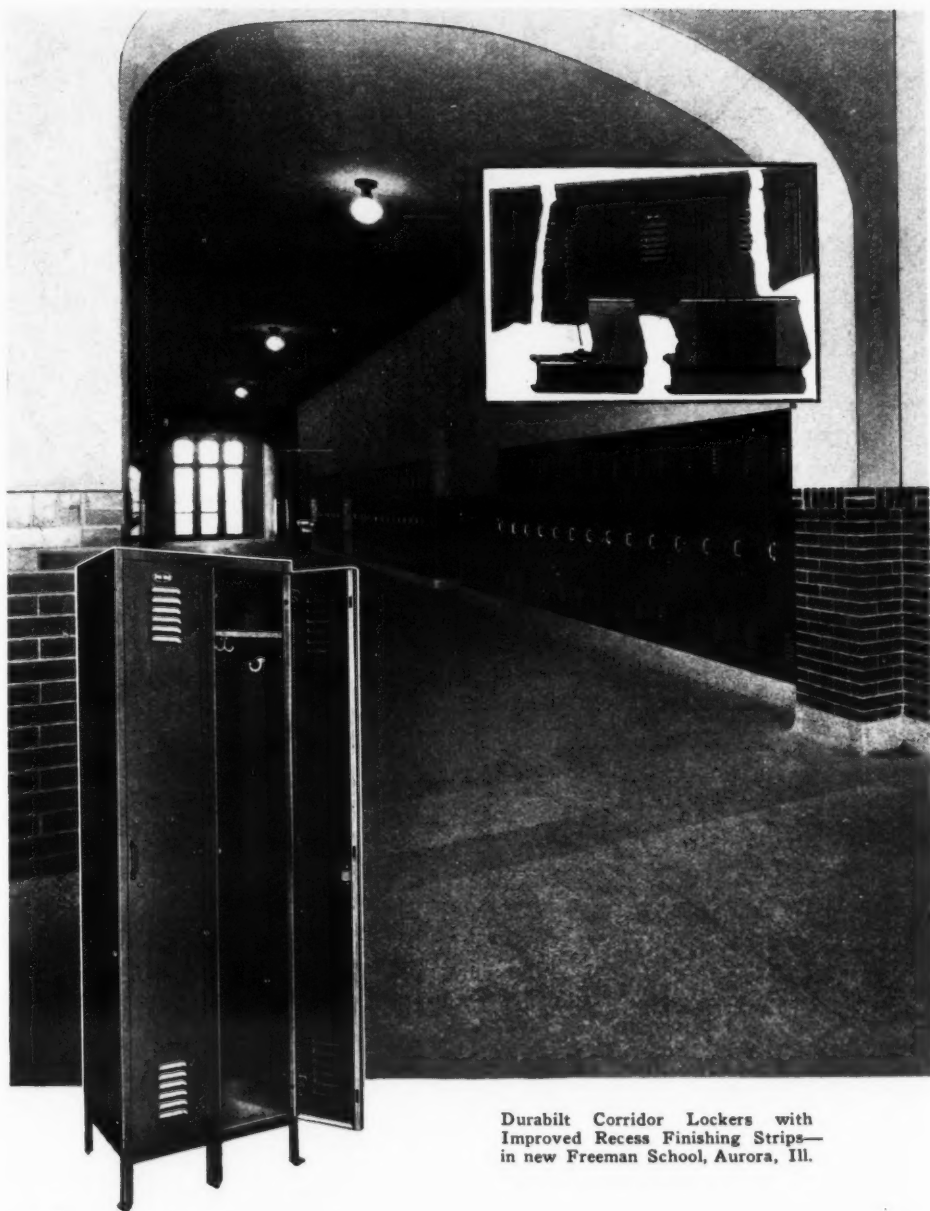
It requires certain standards of building and equipment, a standard salary schedule, then providing at least eight months' school, secondary-school opportunities for all, and transportation if needed.

Not all communities of the state can finance such a program. The state recognizes this fact and requires only a normal tax effort from the local district and then provides the rest of the necessary funds. The distribution of these funds is delegated to the state department of education, with certain general restrictions.

The policy of the state department is to assure the efficient operation of the schools, and also, through a rehabilitation program, aid the local districts in providing permanent improvements in the way of buildings and equipment. Such rehabilitation is to be made available only after the local district has assumed a burden of debt service equal to that of other similar districts.



Only Durabilt Offers So Many Features Of Merit



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An important feature in connection with a Durabilt installation of recessed lockers is the new and improved type of Top and End Finishing Strips which are used to close the openings in the walls surrounding the lockers.

There are no exposed bolts or screws to mar the appearance of Durabilt Finishing Strips. In fact, with their smooth enameled finish they rival the building's finest wood or marble trim.

The above illustration shows, in an admirable way, how Durabilt Recess Finishing Strips materially improve the appearance of a corridor locker installation. They add the "finishing touch" and are indispensable as a part of the decorative

scheme in those buildings where recessed lockers are a requisite.

When plans and drawings for your building are in the formative stage, the assistance of a Durabilt Engineer will be of inestimable value. He can assist in working out the best arrangement to meet your requirements and give technical information on those details that will insure a permanent and satisfactory locker installation.

For complete information as to the service Durabilt can render, phone our nearest Sales Office or write us direct at Aurora. This will not obligate you in any way. We would also be pleased to send a copy of our new fourteen page locker folder No. 6000.

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A Few of the Many Prominent Construction Features

Rigid Door Frame.—1"x1"x1/8" hard steel angle uprights. 1 1/2"x3/4" No. 14 gauge, formed steel channel cross members securely joined to uprights at each end by two 3/8" counter-sunk head rivets, as riveting for this purpose is much stronger than welding. (Since the strength of any locker is dependent on the rigidity of the door frame, it will pay you to look into this point carefully when selecting locker equipment.)

Scientifically Reinforced Door.—There are full-length tubular reinforcements on vertical edges of door, also hemmed flanges on both top and bottom of door. (No danger of bottom flange of door being bent out of shape by stepping on it.) Corners of door are securely tied together by means of arc welding.

Perfect Fitting Top and End Finishing Strips—attached by means of concealed screws. (By far the neatest and most attractive trim ever furnished for recessed locker installations.)

Quiet Automatic Latching Device.—(No metal to metal contact when door is being closed.) This Patented, Tamper-proof Latching Device is *Concealed* inside the vertical tubular reinforcement of door.

Patented Stamped Steel (not cast) Straight-Lift Handle.—With curled grip which provides ample space for comfortable hand-hold.

Padlocking Attachment with Rubber Silencers.—Arranged for use of any standard padlock; and in addition, is designed with two rubber silencers so that noise is practically eliminated when handle is raised or lowered.

Reinforced, full looped (metal formed completely around pin), five-knuckle, Strap Hinge.—Attached to door with two Binder Head bolts, permits door to open approximately 180 degrees. Three each on single tier and double tier standard lockers. The hinges are riveted to the door frame directly opposite the lock fingers as this gives added security. Hinge pins are embedded in angle so they cannot be driven out, neither would the removing of hinge bolts make it possible to enter the locked locker without a key.

Reinforcing Plate Under Hinge.—(This is a No. 14 gauge plate welded to inside of door which serves as an added protection against exceptionally rough treatment.)

Improved Lock Fingers with Rubber Silencers,—which reduce noise from slamming of doors.

Automatic Locking Bar Release.—(Closing of door automatically releases locking bar, permitting it to quietly drop into locked position.)

All Coat Hooks attached with two screws—making it impossible to twist off by hand or remove without use of tools. Udyllite Rust-proof Finish.

Flush Bottom.—(Easily cleaned and built strong enough so that standing on Bottom will not injure it.)

Adjustable Rear Legs.—(Very desirable for leveling up rear of lockers when floors are uneven.)

Adjustable Front Feet.—(Permit anchoring and taking up of irregularities due to floor unevenness.)



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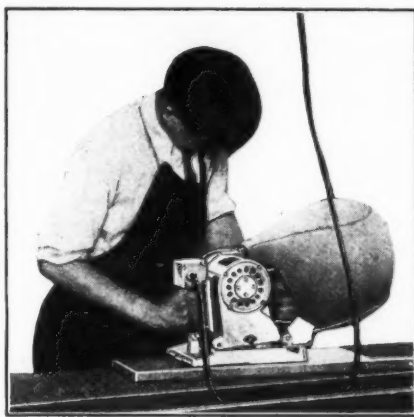
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Vacuum Portable Sanders in the schools of hundreds of communities today. A special information coupon is appended here. Mail it direct to Clarke, pioneer makers of Portable Sanding Machines. Full data will be sent without charge or obligation.



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FIRE INSURANCE PREMIUMS AS AN ITEM OF THE BUDGET

John C. West, Superintendent of City Schools,
Bemidji, Minn.

Superintendents of schools in cities of 10,000 or less population must become fire insurance experts before they can successfully defend their position as heads of the business administration of their schools.

School property fire insurance running into hundreds of millions of dollars with an average of one schoolhouse burned each day last year is generally administered in a slipshod manner. Most states prescribe general form policies and have taken other measures to guard against capital loss. The amount spent in premiums each year must reimburse the companies for fire losses, support the organization, and pay dividends to the stockholders. Capital loss is generally protected, but maintenance or upkeep is unnecessarily costly. The heavy load falls on the building that does not burn, rather than on the one destroyed by fire. The financial leak lies in rate-making. The literature of the profession is strangely silent on premiums, and the superintendent must look elsewhere for information. Literature from the National Fire Protection Association, the National Board of Fire Underwriters, and the insurance committee on insurance and publicity will show the way.

The general inspection bureau, under different names in different states adjusts rates on a basis figure with credits and penalties.

Actual cases will illustrate the procedure:

Case I. Building in city of 8,000. Installation of four 2½-gallon fire extinguishers at \$12 each draws a credit of \$.35 per thousand insurance. This same building draws a penalty of \$50.69 per year because of a wooden shingle roof.

Case II. Another building in the same city is penalized \$.31½ per thousand because the fire door shutting off the boiler room does not bear the approval stamp of the Underwriters' Laboratories. A careful check of this city disclosed items costing the district enough to pay interest on a \$15,000 salary to the superintendent on a basis of avoiding penalties and taking advantage of credits. In school property fire insurance lies a field that will enable the superintendent to contribute one more item to the balancing of the budget, and at the same time reduce the fire hazard of his district.

THE TECHNIQUE OF DEMOCRATIC LEADERSHIP

James F. Hosc, Professor of Education,
Teachers College, New York City

The ideal of democracy in management is now widely accepted, but there seems to be little agreement as to what a democratic leader is supposed to do. In fact there is confusion concerning the true functions of the principal.

Is he, or is he not, always to be democratic?

The answer depends, of course, upon the definition. If to be kindly and sympathetic and respectful of others' personality is to be democratic, then of course principals should be democratic at all times. The functions of the principal, however, are twofold: on the one hand he is the representative of the people who elect the board of education and through that board choose the superintendent and subordinate officers of the school system. In this capacity the principal's duty is not to consult the teachers and pupils as to what they wish to do, but to lead them to want to do what he knows they are required to do. In this respect the principal is simply a good salesman.

In the second place, however, within the limits set up by the rules and regulations of the board and the purposes of the school as set forth in the courses of study and other official documents, the principal and his school are free to operate; within these limits the group has freedom. In this connection the principal can and should be a true democratic leader.

Four principal suggestions can be made as to the technique of such leadership:

1. The principal should take definite steps to make the members of his group acquainted and to cultivate in them mutual respect, confidence, and good will. This can be done through the frank discussion of live issues and through normal social contacts.

2. He should make sure that the problems to be faced are clearly defined. Most difficulties arise from misunderstanding. Those who are going to act together must first think together.

3. He must be a skillful chairman of group discussion. Thinking together involves the consideration of the issues presented from all angles, and the weighing of evidence for and against. In this function the principal should actually prepare questions and outlines and assist the members of

the group of teachers or pupils to reach conclusions after adequate consideration.

4. Finally, he should see to it that discussion bears fruit in action. This means that he should bring about a suitable division of labor. His leadership will be shown in his ability to aid the members of the group in selecting the right persons for different responsibilities. At the same time, in order that all may have an opportunity to grow, he must see to it that tasks are distributed so that each in turn has his chance.

To inspire those who are seeking their own anticipated goals is surely more grateful than to induce others to follow blindly, they know not where.

FEDERAL AID TO EDUCATION

Frank W. Ballou, Superintendent of Schools,
Washington, D. C.

For its work, exclusive of education and medical relief in Alaska, the appropriations for the United States Bureau of Education have increased from \$305,745 to \$346,960 for 1930. The total expenditures under the Federal Board for Vocational Education have increased from \$3,039,061 in 1918 to \$25,715,760 in 1928.

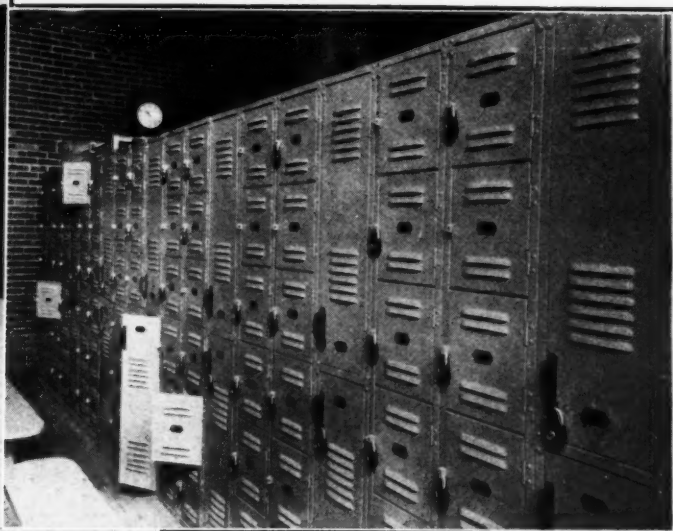
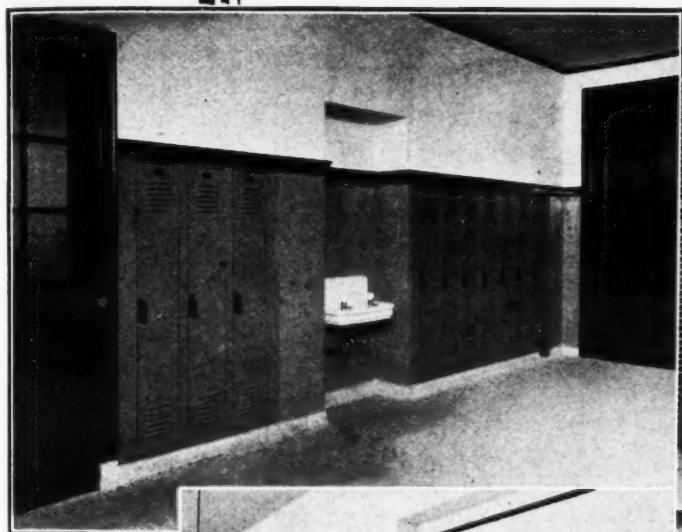
The United States Bureau of Education has made studies of education in several states and in fifteen or more cities, and has investigated a large number of educational problems. The results of all efforts of the United States Bureau of Education are distributed to the nation as professional information.

Provision has been made for a study by the United States Bureau of Education of the organization, administration, financing, and work of secondary schools, at a total cost not to exceed \$225,000, of which \$50,000 is available for the first year.

The Federal Board for Vocational Education expends money appropriated by the national government on the basis of fifty-fifty subsidies. For example, of the \$25,715,760, \$6,821,451 was federal money, \$7,028,966 was state money, and \$11,865,321 was local money. While the Federal Board distributed between \$6,000,000 and \$7,000,000 of federal money, that board has been set up a control of such federal subsidies, which really determines the state and local educational program involved in an expenditure of between \$25,000,000 and \$26,000,000.

(Concluded on Page 138)

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FOR THE CLASSROOM: recessed box compartment lockers provide for the storage of books, lunches and personal belongings. Ideal when classes are confined to one room for all studies.

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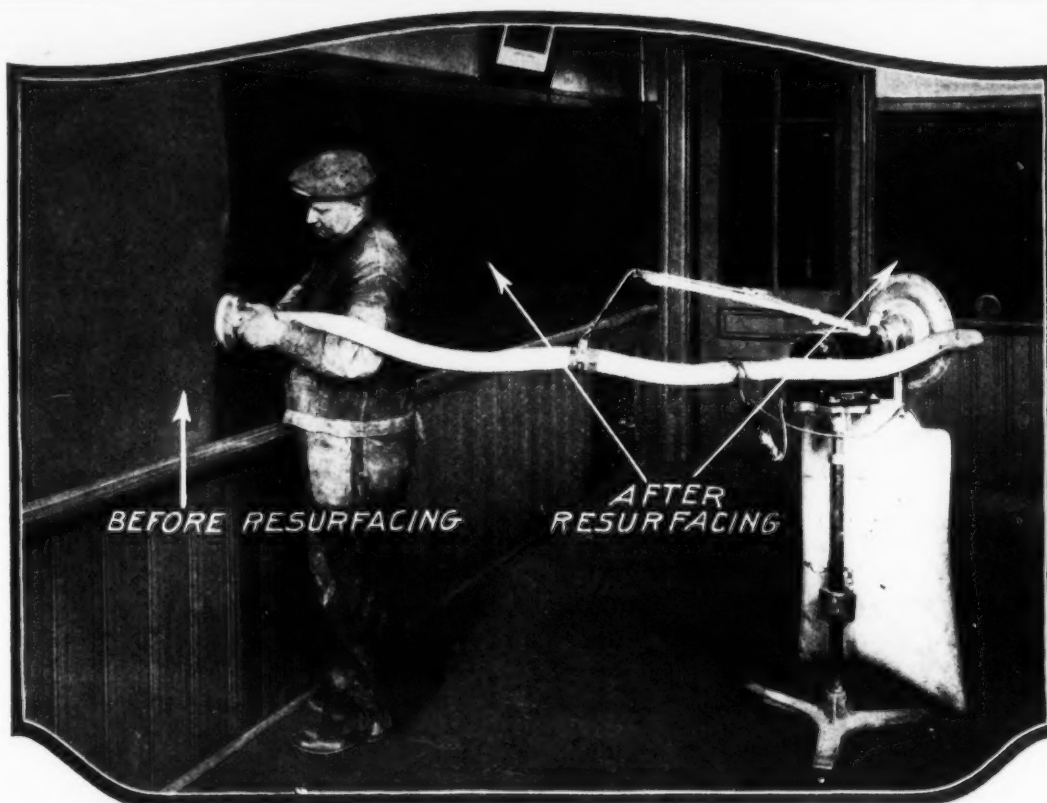
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Our service restores the natural slate color and surface.
We have reconditioned two million square feet of boards.
We guarantee work to your satisfaction or no charge.

Constant repeat orders for additional schools absolute proof of our method.

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1706 FAIRMOUNT AVE.

PHILADELPHIA, PA.

(Concluded from Page 136)

The superintendents of the nation would do well to ponder the following statement of President Coolidge.

"There are always those who are willing to surrender local self-government and turn over their affairs to some national authority in exchange for a payment of money out of the Federal Treasury. Whenever they find that some abuse in their neighborhood needs correction, instead of applying a remedy themselves they seek to have a tribunal sent on from Washington to discharge their duties for them, regardless of the fact that in accepting such a supervision they are bartering away their freedom."

THE ATTITUDE OF THE PUBLIC TOWARD TAXATION

A. L. Threlkeld, Superintendent of Schools, Denver, Colo.

Wanton extravagance and carelessness in the expenditure of public funds were natural attendants of tribute taking in the early history of taxation. Unfortunately, the idea that public funds may be so spent comes down to very recent times, and perhaps examples of it can be found even in current American life. This tends toward the presumption that public moneys are to be spent for the private ends of officials.

In combat with these mental complexes against the idea of taxation suddenly comes a highly specialized and interdependent life. The necessary tax-supported services prior to the industrial revolution and the present highly specialized interdependent life which has come were indeed few in number and quite simple. This is far from true today. Sudden increase in need for taxes coming upon a background of traditional hatred of the idea of taxes makes the situation crucial.

We must through education point out the facts in this change which affect the need for tax-supported services. We must present the historical explanation of the complex toward the idea of taxation. We must produce an attitude of mind consistent with concrete conditions. To the extent that such education brings about a wise expenditure of taxes, such funds will be appreciated as more fundamental in importance than any other expenditure.

The wise expenditure of the tax dollar is basic to a proper functioning of every private dollar. Conversely, an unwise or dishonest or careless expenditure of the public dollar will be fully rec-

ognized as the greatest of all property crimes. Such improper expenditure will be thoroughly understood to damage not just one person, or one group, but all people. The attitude of the public mind on taxation will come to be in accord with the facts of life as life now is.

ECONOMY OF TIME IN THE REORGANIZATION OF EDUCATIONAL UNITS

Samuel P. Capen, Chancellor of the University of Buffalo, Buffalo, N. Y.

Economy of time is an old issue. We have continued to think of it and to discuss it in the old terms. But within twenty years conditions have changed so radically that we must now think of the issue in new terms. Three major changes affect the problem, as follows:

First, we have come to recognize the infinite variability of individuals and have made large progress in adapting the school procedure to the accommodation of individual differences. In other words the school system as a machine has become more flexible. Second, through the almost nationwide establishment of junior high schools and junior colleges the great structural reform of the administrative units of the system that has long been advocated has been effected. (But it has not brought us the general economies that the early reformers predicted.) Third, there has been a steady extension of the scope of professional education. Time requirements have been increased both in strictly professional courses and in the preparatory courses demanded by nearly all types of professional schools.

In view of these changes it appears that our present efforts to secure economy of time must take a somewhat different direction. They must address themselves to the individual pupil rather than to the further remodeling of the system as a whole. Devices to secure for the able student a more rapid transit through the several institutional stages of the educational system must be developed. This is at the moment the most productive line of attack on the problem of economy of time.

THE FUNCTIONS OF THE ASSISTANT SUPERINTENDENT OF SCHOOLS

Mary A. S. Mugan, Assistant Superintendent of Schools, Fall River, Mass.

The duties of an assistant superintendent in a city-school system are both administrative and supervisory. Some of the functions that are administrative are as follows:

1. The acquirement of comprehensive knowledge of the system as a whole and a grasp of the innumerable details of various parts of the school system, so that effective assistance may be given to the superintendent and, so that in his absence, the direction of the school system may be carried on, without loss to the pupils or to the community.

2. Determination of policies in conference with the superintendent, and of ways and means of working out those policies in the system.

3. Organization and adjustment of classes.

4. Recommendations for appointment and transfer of teachers and for training of teachers for specific positions.

One of the chief duties of an assistant superintendent is to study constantly conditions in the schools with the purpose of recommending way to better them. The improvement of instruction is always an objective of importance. The assistant superintendent should make a constant study of supervisory procedures with the purpose of helping teachers to discover ways to improve classroom management and instruction. Visitation of classes is not the only means of accomplishing improvement in instruction. Some of the important supervisory functions of the assistant superintendent are the following:

1. Conferences with supervisors, principals, and teachers for the organization and adjustment of the curriculum, for the establishment of agreement upon basic principles and upon the adoption of procedures that will make basic principles active in the schools; for discussion of current theories and practices, so that the teaching force may themselves determine intelligently what are genuinely progressive movements in education and what are merely fads.

2. Organization of committees of principals for work on the curriculum, for the selection of textbooks, and for discussion of other problems.

3. Composition and distribution of bulletins putting into definite form suggestions for classroom procedures.

4. Visitation of classes for observation and for helpfulness to principals and teachers.

5. Organization of demonstration lessons given by the assistant superintendent, by supervisors, and by teachers.

6. Conferences for guidance of individual teachers in solution of problems, in choosing courses for professional improvement.

NORWEST

STEEL LOCKERS



Here is another interesting installation of NORWEST Gable Top Lockers — in the Cregier Junior High School, Chicago.

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In Our Own School of Hard Knocks

ALL the skill — all the knowledge that the locker industry possesses is expertly applied to the building of NORWEST Steel Storage Equipment.

In addition NORWEST lockers are under surveillance *after* as well as *before* "they go to school."

Their behavior under "punishment" is con-

stantly being recorded. And the findings carefully analyzed and digested in our engineering department and plant.

Since they thus ever keep step with the march of scholastic progress it is no wonder that NORWEST lockers so satisfactorily meet the storage needs of *tomorrow* as well as *today*.

YOU WILL BUY—more satisfactorily if you first
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NORTH WESTERN STEEL PRODUCTS CO.

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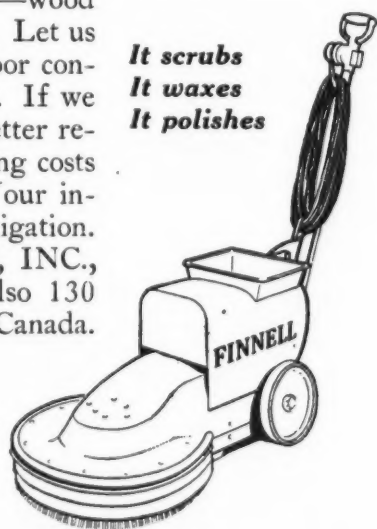
is more than just
five brushes and a
motor

It is not so much what you see as what you cannot see in a FINNELL that makes it the logical choice of a school superintendent or business manager investing in floor scrubbing and polishing equipment.

In every FINNELL there is a life time of inventive skill—placed there by the man who first developed a workable power driven floor scrubber. There's a quarter century of mechanical development. There is a widespread organization—a service branch in more than thirty of the country's large cities besides those in Canada, England, Australia and Sweden.

In a FINNELL you get more than just a machine. You get incomparable floor cleanliness, noiseless, dependable operation, long and trouble free service, and the aid of a corps of floor maintenance experts who have met and mastered every conceivable floor maintenance problem. You get a machine that can wax, polish or scrub with equal ease and efficiency. It can also remove varnish and do light sanding.

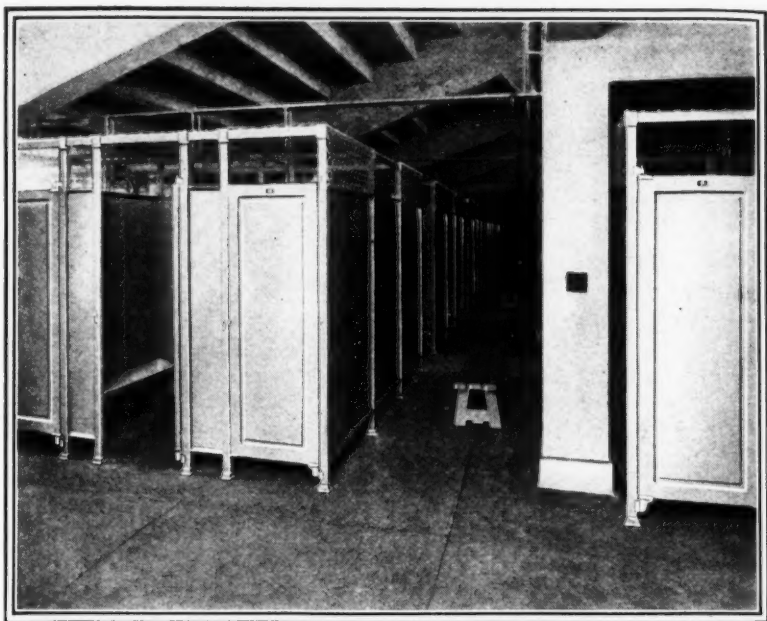
There is a FINNELL for your need and at a budget-protecting price. Eight models—a right size for any amount of floor space and any kind of floor—wood or composition, crowded or open. Let us make a survey of your school floor conditions. It will cost you nothing. If we cannot show you a way to get better results or a way to cut your cleaning costs we will candidly tell you so. Your inquiry places you under no obligation. Address FINNELL SYSTEM, INC., 804 East St., Elkhart, Ind. Also 130 Sparks St., Ottawa, Ontario, Canada. Factories, Elkhart, Ind., Hannibal, Mo., and Ottawa, Ont., Canada.



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Built-in Strength for School Abuse

SCHOOL architects, builders, and school boards everywhere know and appreciate the great amount of abuse toilet and dressing compartments in schools receive. School children are not only careless with such equipment—often they are wilfully destructive. Quite naturally the doors bear the brunt of this kicking, pushing and shoving at recess and after school. Only equipment that is designed to withstand the worst mistreatment possible will give satisfaction.

WEISTEEL compartment doors are fabricated from copper bearing sheet steel, electrically welded into a substantial unit. The four corner joints of the mitered stiles and rails are electrically welded by an exclusive process. We employ a unique reinforcement at each door corner, so that the corners, instead of being the weakest, are actually the strongest part of the unit. These joints are then finished flush and smooth, insuring a pleasing appearance.

These extra construction features make WEISTEEL equipment the most economical equipment you can buy. We shall be glad to tell you of a school installation near you for you to see. Write us today . . . No obligation of course . . . HENRY WEIS MANUFACTURING CO., INC., Elkhart, Indiana.

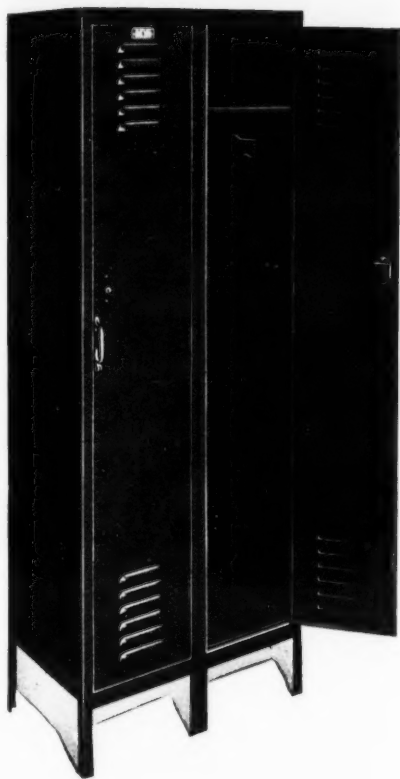
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are the basis of A-S-E prestige in the school locker field.



A thoroughly built, sturdy locker—scientifically designed—rigorously tested in actual use—embodying features exclusive with the A-S-E line. A steady development during eighteen years of experience in locker manufacture and installation.

Built in the modern, efficient A-S-E factories, specialists in sheet steel fabrication—with up-to-the-minute machinery—by men mindful of A-S-E reputation—enabling A-S-E quotations to be well in line and supported by high quality installations.

Write for our new catalog C-25, Dept. S, illustrating and explaining our complete standard line, and for information about our free engineering consultation service.

Principals and teachers find excellent storage and wardrobe facilities in our new combination cabinet, No. 3688. Complete descriptive cabinet catalog S-27 will be mailed you on request.



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Our school-boy tests to which A-S-E lockers may be subjected and remain true and in alignment are shown in catalog C-25. The final analysis of why A-S-E locker installations are highly satisfactory.

WASHINGTON CORRESPONDENCE

By A. C. Monahan, Formerly U. S. Bureau of Education

Deaths Among School Children

The number of school children who die each year is much greater than ordinarily supposed, according to the U. S. Bureau of Education. A study of the subject made by Dr. J. F. Rogers, Chief of the Division of Physical Education and School Hygiene of the bureau, is based on public health reports for 1925. These are for the "registration area" which at that time had an estimated population of 103,109,000 persons of all ages (about 90 per cent of the total population) of whom 9,057,000 (or about 9 per cent) were colored. Statistics by groups are given for children 5 to 9 years and 10 to 14, which represent fairly well the ages of the school population. In the 5 to 9 years group there were about 11,027,644 children, and in the 10 to 14 group 10,222,908. The deaths in the former group in 1925 were 22,513, and in the latter 18,448. The total deaths from 5 to 14 years of age was 40,961. Roughly, one in every 500 children at these ages died in an average recent year in the registration area.

As the registration area represented about 90 per cent of the total population the estimated deaths at 5 to 14 years of age for the country at large would be about 35,000. Many children attend school after their 15th year and the total enrollment for this year at school ages as determined by the Bureau was 24,650,292, so that the total number of deaths in children of school age was around 50,000, or about 135 for each day of the year. The deaths among colored children were relatively much higher than those for white children, being approximately 3 per 1,000: thus lowering the rate for white children to 1.95 per 1,000 at ages 5 to 9, and to 1.65 per 1,000 at ages 10 to 14.

Diphtheria, influenza, tuberculosis, diseases of the nervous system, heart diseases, pneumonia, appendicitis, and "accidents" are the principal causes of these child deaths. Twenty-one per cent were due to accidents, and 35 per cent of these were killed by automobiles.

Of the causes, deaths from typhoid, malaria,

smallpox, diphtheria, dysentery, rabies, tetanus, syphilis, pellagra, and rickets are practically all preventable. By better protection from infections, tuberculosis would be much less frequent, while with prompt isolation and better care of the sick, deaths from scarlet fever, whooping cough, mumps, measles, and some other causes, could be reduced. Granting that the ten diseases named first were eradicated and that mortality from tuberculosis were cut in half there would be a saving of 5,000 lives per year. A great many deaths labeled with other names are the end results of the diseases named above, and by putting into full effect our knowledge of hygiene along all lines, twice the above number of children could be saved. While this cannot all be accomplished through the schools alone, they would have a considerable share in it, and an adequate teaching of hygiene should lead to better child care and to the establishment of better machinery for public health in the generation to come.

There is but scant excuse for at least half of the terrible loss from accidents. The schools should do their share in its prevention by the provision for safe crossing of streets before and after school, by fencing of playgrounds, by providing safe transportation, and by adequate teaching of safety lessons. Fires in schools are of too common occurrence, due to faulty heating plants, or to carelessness of janitors, while provision for rapid escape from buildings is not always furnished.

Additional High School for Washington, D. C.

A new high-school building, to cost approximately \$1,500,000, will be erected in Washington during the coming year. The municipal architect is at work on the plans and it is expected they will be completed by June first, and the contract for the erection of the building let by July first. Congress has appropriated \$300,000 available on that date for starting the building.

The new building will house the present Business High School and in addition will be a general high school for that part of Washington, north beyond the present Central High School extending to the district line. This section has developed rapidly since the War and contains now a large population not easily served by the existing high schools. The new building will be on Upshur street, adjacent to one of the present junior high schools, and will be ready for occupancy within two years.

The building will relieve many of the inconveniences and hardships incident to overcrowding of

students at the Business High School. Although the new school will not be as large as the Technical High School, it is certain that it will be able to adequately care for students who desire to attend for the next five years.

Attendance at Cleveland

Approximately 15,000 persons attended the recent meetings at Cleveland in connection with the annual meeting of the Department of Superintendence of the National Education Association. The number who registered at the registration desk as members of the N.E.A. was approximately 10,000. The exact number of superintendents, members of the Department itself, who registered, paid dues, and received badges of admittance to department meetings was 3,619. At one meeting counters at the various entrances registered over 11,000 persons passing in to the meeting.

The officers for the year are Frank Cody, superintendent of schools of Detroit, president; Frank D. Boynton, superintendent of schools of Ithaca, N. Y., first vice-president; Norman R. Crozier, superintendent of schools of Dallas, second vice-president; and S. D. Shankland, executive secretary. David E. Weglein, superintendent of schools of Baltimore, was elected a member of the executive committee for a four-year term.

The place of the 1930 meeting has not been selected as yet. However, President Frank Cody invited the representatives of various cities who desire the convention next February to meet with him and discuss the matter. Officials from eleven cities responded and the meeting will probably go to one of these. They are Atlantic City, Chicago, Indianapolis, Kansas City, Memphis, Minneapolis, New York, Philadelphia, San Francisco, Toronto, and Washington, D. C.

The U. S. Bureau of Education

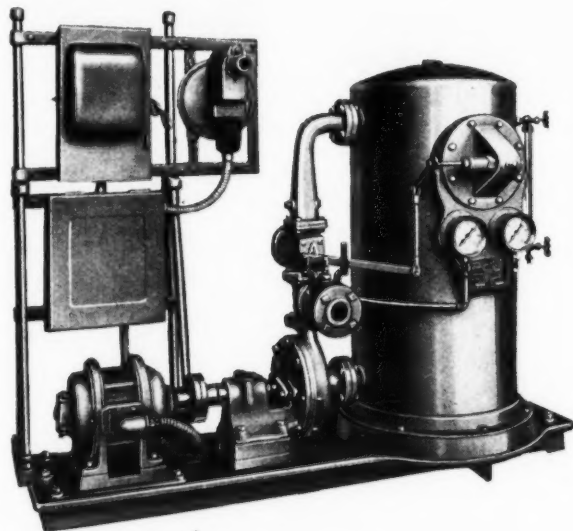
The future of the Bureau of Education at the present time under the new administration looks very bright. The Commissioner, Dr. William J. Cooper, who took office on February 20, is remarkably well equipped for the work, having served in various administrative positions including that of a city superintendent and state superintendent of California. He comes directly from public-school work and is an active member of the N.E.A. Another point in the favor of the Bureau is that the new commissioner has for his immediate supervisor, the secretary of the interior, a fellow statesman,

Having Pump Troubles?

Eliminate Them By Installing a Dunham Vacuum Pump

DUNHAM VACUUM PUMP DATA

Size	Sq. Ft. of Radiation	Lbs. Pressure at Pump
V0A	5,000	18
V1A	8,000	20
V2A	16,000	20
V3A	26,000	20
V4A	40,000	20
V5A	65,000	20
V6A	100,000	20



If vacuum pump trouble is one of the problems with which your engineer has to contend in order to obtain efficiency for your school heating system, you can eliminate it by installing a Dunham Vacuum Pump. This pump will give you many years of trouble-free service. It provides a flexible, economical and thoroughly reliable unit coordinating the results of scientific research and approved engineering practice.

The Dunham Vacuum Pump produces a powerful vacuum in the return piping, automatically returning the water of condensation to the boiler and permitting the discharge of air to the atmosphere. As the condensate is returned to the boiler under a 20 lb. effective pressure at all times, the proper boiler water line is maintained at any boiler pressure which you may use in your heating system.

The electrically driven centrifugal pump, Dunham Exhauster, air separating tank and automatic discharge valve are compactly assembled on a rigid cast iron base to which the control equipment is attached. All wiring between the starter and motor is furnished. Each unit is individually tested under its own control and power before shipment, insuring perfect operation as soon as installed.

No small share of your school's heating depends on the efficiency of your vacuum pump equipment. Why not refer your engineer to us for complete data on Dunham Vacuum Pumps?

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and a leading educator, Dr. Ray L. Wilbur, president of Leland-Stanford University. There is no question that the needs of the Bureau will be given full consideration.

Dr. Cooper finds the Bureau well housed and with an efficient personnel. He proposes no radical changes in its organization or work until he finds whether any changes are necessary. He proposes to keep an open ear to the educational world so that he may direct the activities of his organization to do the things which the educators of the country need done the most. His platform is expressed in his closing remarks in an address at Cleveland at the recent meeting of the Department of Superintendence when he said:

"And now that you, the school administrators of America who are carrying on the work so well begun by the National Association of Superintendents of Public Schools, have formally received the eighth commissioner of education here in this state of Ohio, what more should the commissioner say? Perhaps it will suffice for him to state that he has the same faith in universal education as a prerequisite to universal liberty as did Superintendent Richoff, that he is as anxious for the Bureau of Education to render service to the schools of America as was Commissioner E. E. White, that he has the same pride in the public-school systems of the American states as James A. Garfield had in the public schools of Ohio. In fact your commissioner is the product of the public-school system, elementary, secondary and collegiate, of one of the states of this Union. For 22 years he has served public schools as teacher, supervisor, and as administrator. For nearly a decade he has been sitting among you as a fellow city superintendent, or as a fellow state superintendent. He now awaits your advice, your counsel, and your instructions, for it is written: 'Whosoever will be chief among you, let him be your servant.'"

CHICAGO CORRESPONDENCE

One hundred twenty-five teachers, principals, department heads, and superintendents in the Chicago public-school system attended the N.E.A. meeting at Cleveland. This is three times the usual number.

Apparently it has become an open season on Chicagoans, when they visit other cities. It was a not unusual form of greeting for a Chicagoan to be given a mock search, "frisking" him for weapons. "Set 'em up in the next alley" was the way one

prominent superintendent described the Chicago way of gangster methods. Like the Europeans who sometimes think that Indians and buffaloes still roam about America, it is hard to convince some school friends in other cities that some Chicago people do not lock their doors day or night and are in no more danger of molestation than in a village of 500.

Chicago made a bid for the convention next February. In spite of ability to take care of great throngs (17,000 first-class accommodations in the loop) and in spite of its central location and accessibility for the masses of convention-goers, Chicago's chances are lessened by the lack of exhibit space. Exhibitors apparently want their wares all on one huge floor. The exhibits have grown to be such an important part of the N.E.A. convention that there are few cities to qualify.

Several Chicago educators went and returned via airplane. The 318 miles "as the crow flies" were traversed in two hours and twenty minutes of flying time (one way). A special rate of one fare for the round trip was made for the N.E.A. convention. The trip was quite interesting. About 50 miles from Cleveland, the airplane passed up the fast train which left Chicago at noon. The airplane left Chicago at 4:00 p. m. The last three quarters of an hour was spent in darkness, following flashing beacons. One felt quite superior to be sailing over rivers, woods, twinkling villages, and lakes at the rate of two miles a minute and about two thousand feet up in the heavens! What seemed like the most dangerous part of the trip was after landing, when the taxi from the airport to the downtown section speeded wildly over icy streets. Evidently the taxi driver mistook the pedagogs for high-pressure business men who had come by airplane to catch a fast train, or to attend a directors' meeting, or something. Where a handful of N.E.A. folks went by airplane this year, perhaps hundreds will next—and what about ten years hence?

Edward E. Keener, principal of the Lincoln school, Chicago, and formerly vice-president of the American Educational Research Association, has announced his withdrawal from the public-school service in order to affiliate with Laidlaw Brothers in an editorial capacity. It is surprising how many excellent educators have been lured into the publishing business recently.

This is a legislative year—that it, the 56th General Assembly is in session at Springfield, and there

are many school bills introduced and pending.

The Chicago school board is sponsoring a bill to permit payment of as high as six per cent, instead of the five per cent now set up, for interest on its tax-anticipation warrants. The school board has found it almost impossible to sell its warrants to the banks at five per cent when the city pays six per cent.

Superintendent William J. Bogan and Assistant Superintendent James E. McDade have launched a constructive publicity project. It started simply when a meeting of editors of elementary, junior-high, and senior-high-school newspapers was called. These young editors were addressed by H. F. Harrington, director of the Medill School of Journalism, Northwestern University, and by several members of the educational department of the Chicago school system.

Plea was made for a constructive news about the schools, and a city-wide rather than a strictly local attitude.

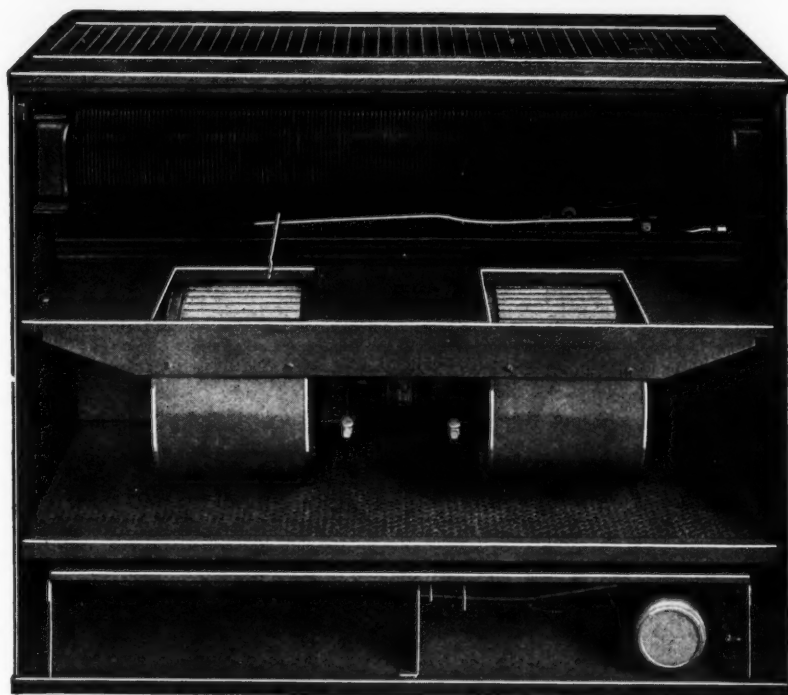
It was agreed that the editors would exchange papers with all of the others, and with the "central office." The superintendent promised cooperation. Mr. McDade announced that he will edit and send out a weekly bulletin of "school facts."

Most of the large city newspapers play up sensational news rather than the daily work of the school system. The aim of the school facts Bulletin is, to provide readable material to the school papers so that the family circle will receive authentic and constructive data regarding the schools.

THE FUNCTION AND VALUE OF A PUBLIC-SCHOOL RESEARCH BUREAU

(Concluded from Page 48)

tional publicity has expressed it, what we really need is more helpful, more forceful, and more attractive presentations of research. This is particularly true where further progress is a matter of the support of the teaching staff, or of the general public which must raise the necessary funds. Finally, the value of a research department depends upon the scope of the service it renders, the importance of the problems it solves, the timeliness of its solutions, the accuracy of its conclusions, and the conviction which those conclusions are made to carry.



Improved PeerVent Unit with front removed to show interior. All parts can easily be removed and replaced, for inspection or cleaning, without tools. The air filter (extra equipment) can be of any make specified.

Latest Improvements in Unit Heating and Ventilating

backed by 38 years of specialized experience

Many important new features have been developed for PeerVent Heating and Ventilating Units during the past several months. In fact, *all* of the important features—radiator, motor, fans, and controls—have been improved. These improvements, made by the pioneer manufacturers of Heating and Ventilating Units, should have your careful consideration.

Adjustable motors are now standard equipment on PeerVent Units. Once set, these motors run at constant speed, to deliver the exact c.f.m. capacity required.

PeerVent Units can now be equipped with the PeerTherm Control as an integral part of the Unit. This device controls the fresh-air damper.

Catalogue B-4 on request.


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Tentative Program for National Association of Public-School Business Officials

The National Association of Public-School Business Officials is completing plans for the program of the next annual meeting to be held May 21 to 24 at Columbus, Ohio. President George King of the Association has issued a tentative program which offers a partial list of the subjects and speakers who will participate in the program. These are as follows:

Schoolhouse Planning, Dr. P. C. Packer, Ohio University, Columbus.

Capacity Use of School Buildings, Mr. H. G. McGee, director of municipal research, Akron, Ohio.

Keeping the Public Informed About School Activities, Mr. Fred Charles, manager of the public relations department, Cleveland, Ohio.

Standardized Accounting for Public Schools, Prof. A. B. Moehlman, University of Michigan, Ann Arbor.

Phases of Business-Administration Problems, Dr. E. E. Lewis, department of business administration, Ohio University, Columbus.

Development and Use of a Detail Budget, Mr. E. T. Stretcher, clerk of the school board, Portland, Oreg.

A Work-Study-Play Program, Mr. A. H. Bell, Gary, Ind.

Vocational Education, Mr. F. B. Edmunds, Toronto, Canada.

Some Practicable Economies in School Administration, Mr. G. E. Roudebush, assistant superintendent of schools, Columbus, Ohio.

Making an Analysis of Increases in School Operating Costs, Mr. R. S. Wenzlau, director of schools, Toledo, Ohio.

The Rochester Plan of Administering School Supplies, Mr. J. S. Mullan, secretary of the school board, Rochester, N. Y.

Styles of School Architecture, Mr. W. R. McCornack, Cleveland, Ohio.

School Legislation Enacted by the Ohio Legislature, Mr. J. L. Clifton, director of education, Columbus, Ohio.

The Ideal Superintendent from the Viewpoint of the Business Manager, Mr. J. S. Mullan, secretary of the school board, Rochester, N. Y.

The Ideal Business Manager from the Viewpoint of the Superintendent, Mr. William J. Cooper, Washington, D. C.

Complete information regarding the speakers and their subjects may be obtained from Mr. John S. Mount, secretary of the association, state education department, Trenton, N. J., or from Mr. Ward G. Reeder, of the department of school administration, Ohio University, Columbus.

HOW A COMMUNITY MAY PROFIT FROM AN ADEQUATE STATE-WIDE FINANCIAL SYSTEM

Paul R. Mort, Associate Professor of Education, Teachers' College, Columbia University, New York City

Whether or not a community would profit by an adequate system of state finance is not a matter of its population. The determining elements are (1) its relative ability to pay for the education of the boys and girls which it has to educate and (2) the relative amount of burden which must be carried by the tax source upon which the community is given the right to levy taxes.

Even large cities cover a surprising range in relative ability to support schools. Many cities of only mediocre relative ability to support schools are sadly in need of the assistance which a proper system of financing schools would bring them. They are blinded by the fact that they have been lucky in having trained educational leadership which has led them to support schools above the average.

Even those communities which have a high relative ability to support schools can reap advantage from an adequate system of state support. In most states the existing system of financing schools throws a large burden of the support of local schools upon a tax base which is already overtaxed compared to other possible tax bases. The result is that every community, be it relatively rich or poor, must obtain educational progress by placing additional taxes upon those taxpayers who are already carrying an undue share of the total tax burden. As a result, the superintendent of schools in any city, large or small, cannot depend for the support of his program upon the willingness of his com-

munity to pay taxes. He must, rather, depend upon the willingness of property taxpayers to carry an additional burden over and above their already unfair burden. A proper system of state finance may well shift a large share of the cost of a minimum program of education from local property tax to tax sources available only to the state and thereby reduce the tax burden which must be carried by a special group of taxpayers in the community. This will lessen the burden which the superintendent of schools must carry in financing that part of his program which is over and beyond the program required by the state.

NEW BEAVER DAM SALARY SCHEDULE

The school board of Beaver Dam, Wis., has adopted a single-salary schedule based on training and experience of the teachers. The schedule, which became effective on April 1, provides for a minimum training requirement of graduation from a two-year course in a state teachers' college, and a minimum salary of \$1,000, with a maximum salary of \$1,200 for teachers with experience. The minimum for men teachers is \$1,600.

Teachers who complete six weeks of training in addition to the two-year course, will be paid an additional \$25, with a minimum of \$1,150 for three years' training above the high school, \$1,300 for four years' training, and \$1,450 for five years' training.

A maximum salary of \$2,000 for women, and \$2,300 for men, exclusive of twelve-month positions, is provided.

For each year of equivalent successful experience elsewhere, teachers will be given an additional \$50. The increase given for each year of successful local experience is determined by the board of education upon the recommendation of the superintendent.

Elementary principals appointed to positions in the schools must have a minimum of four years of training above the high school and four years of teaching experience.

—Everett, Wash. Under a new rule of the school board, the eligibility of teachers to receive the annual increases in salary will be dependent upon their efforts toward self-improvement. Teachers who spend their vacations attending summer schools, who take extension courses during the school year, and who spend their time and money fitting themselves to render more efficient service to the community will receive recognition in the form of salary increases.



He Should Have Attended the *Morning Sessions* . . .

Because his health was frail, René Descartes was sent to school only in the afternoon.

The morning classes would have been much better, for as most schoolrooms in the early seventeenth century, the one at La Fleche that this famous French philosopher attended as a boy was improperly ventilated and badly heated by a smoking, wood-burning fireplace.

By afternoon, the little schoolroom was so laden with pungent fumes that the bad heating and ventilating facilities soon told on the pupils' health and greatly impaired their learning.

But now times have changed. The modern school demands clean, pure and wholesome air not only during the

morning classes or just in the afternoon, but whenever the school is occupied.

The American Blower Corporation, specialists in heating and ventilating equipment, offers Universal Heating and Ventilating Units which already are installed in a long and imposing list of the nation's schools.

Whether you are considering an installation in a new structure or your present one, you will find these Units simple in design—efficient in operation—absolutely dependable. They deliver a constant supply of fresh, heated air—eliminating the danger of direct draft.

Call or write for complete information.

AMERICAN BLOWER CORP., DETROIT, MICHIGAN
CANADIAN SIROCCO CO., LTD., WINDSOR, ONT.
BRANCH OFFICES IN ALL PRINCIPAL CITIES

A free book of 112 pages
showing installations of
Universal Units in all parts
of the country will be sent
you promptly upon request.



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VENTILATING, HEATING, AIR CONDITIONING, DRYING, MECHANICAL DRAFT
Manufacturers of all Types of Air-Handling Equipment Since 1881

**74 YEARS OF EXPERIENCE
ARE BEHIND CRANE VALVES AND FITTINGS
FOR BUILDINGS**

CRANE

**MANUFACTURING PRECISION
MAKES THEM EASY AND ECONOMICAL
FOR YOU TO INSTALL**

**THE REHABILITATION AND CARE OF
SCHOOLHOUSE FLOORS**

(Continued from Page 60)

16. Use linseed oil and turpentine, not certain that it is advisable to do so.

17. Floor oils are not satisfactory. We use a paraffine oil, at 15 and 18 cents. Amberlite is a good grade of penetrating varnish, wears well, and is permanent it seems. Have experimented for two years.

18. We are on the verge of changing from oil to wax. This would abolish all oil, sweeping compound, and probably brushes.

19. The school board has decreed that floors shall be scrubbed once a month or oftener. The gym floor is treated with linseed oil. We use three scrubbing machines. Will install more. Use vacuum cleaner.

20. Using Blue-Top cleaner. Works well but quite a task for janitors.

21. We use Semdac. An experiment with a scrubbing machine followed by the application liquid wax did not prove satisfactory.

22. Removed oil nine years ago, use sweeping compound since. Wax on new maple floors. We use brushes and sweeping compounds on floors that are not smooth, but mops on smooth floors. Why waste money on oil or compound when you have a good floor?

23. We have surfaced the maple floors and treated them with linseed oil. We sweep with compound and plan to scrub lightly and treat with hot linseed oil once a year. Wizard floor sweeping compound seems superior because the oil is contained on the powdered corn cob particles instead of on the outside of sand grains and as a result does not grease the floor badly where you scatter it.

24. Well pleased with linseed oil this year.

25. We use Semdac and Blue-Top.

26. We have used Minneapolis Public School Floor Preservative in one schoolroom. It requires a mop, not a brush, no sweeping compound. The floor assumes and retains a beautiful golden hue. Hope to use this in all rooms.

27. An oil that permeates the wood serves our purpose nicely.

28. Our floor results are just what we do not want.

29. Have replaced two floors per year. Semdac makes floors very dark.

30. Have been using a floor dressing, the base

of which is a good gum. It needs little care over a period of five years.

31. Scrub three times a year, use no oil.

32. Trying a dressing which contains a wax. Results most satisfactory.

33. Quit oiling; have scrubbed and applied wax. Results not so good. Now letting old oil wear out.

34. Scrubbing machines do not get corners or close to desk castings. Fine for large halls.

35. No oil; use scrubbing machines, scrub every six weeks, floors well kept.

36. Semdac is applied after a thorough scrubbing. Surplus oil is removed after two days.

37. Use Hillyard filler and dressing on our maple floors. Results very satisfactory. Oiled mop used for cleaning.

38. Considering abandoning floor oil. Will try Car-No-Var in our new building.

39. Will use Battleship linoleum or rubber stone floors over concrete in our new building.

40. Never used oil on maple floors. If any, use only linseed.

41. We use a sanding machine on our floors at least once a year. Then wax or Car-No-Var is applied.

42. We shall probably wax the floors after we get the oil out of them.

43. Have changed from heavy oils to lighter oils—greater satisfaction.

In every school listed where the use of floor oil has been discontinued, the substitute has been linseed oil, Car-No-Var, Om-O-Pine, varnish, or wax. In the use of these preparations the results are somewhat the same. The base of these products is a substance that produces a hard, or tough surface, wears well, wears smooth, and is more easily cleaned than the oiled floor. The electrical attraction for dust that some salesmen claim for their floor dressings is present in any hard-waxed or hard-finished wood surface, when brushed. Scrape your feet along your own hard, smooth surfaced floor and you will see sparks fly from your fingers when you touch a radiator.

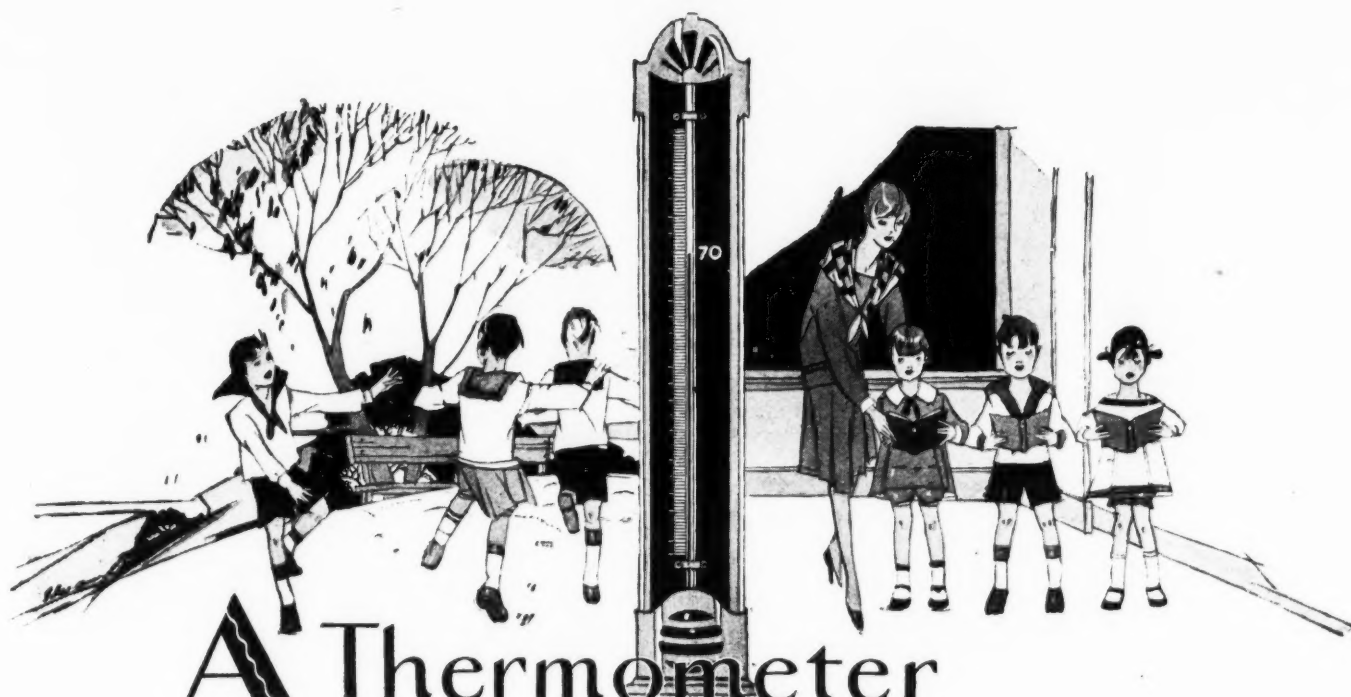
In Kewanee my experience with oil has been one of disappointment. Our old pine floors became uncomfortably dark. Two years ago our board had permitted me to have one of these

floors sanded, to remove the black surface. The floor was divided into four parts and each part was treated with a different floor preservative. We applied to one quarter hot linseed oil, to the second an English paint oil, to the third an oil and wax preparation, and to the fourth a French floor dressing. A small portion was left unoled, but it became so unsightly in a few days that it was treated with the French floor dressing. This room was not used for two weeks. Then the desks were again placed, and the floor was subjected to the usual classroom traffic for four weeks. It happened at a time when wet weather caused a great deal of dirt to be carried in on the children's feet. The treatment on the first three parts did not hold the dust down, but the floor grew darker and dirtier as time went on. In the meantime it was necessary to give a light coating of oil to the first three parts in order to keep the dust down.

The final decision after a season's wear and thorough scrubbing was that any one of the first three treatments left the floor in better condition than the section treated with the French floor oil. The portion treated with linseed oil took on a pleasing amber color, wore rather smooth, and made sweeping quite easy. On the strength of this test, we sanded during the summer, the entire floor surface of the eight-room building, and treated all of it with hot linseed oil. Then, before the opening of school, we added sparingly an application of Semdac. We now have an agreeable, amber-colored floor that holds down the dust fairly well. The janitor's work has been lightened materially, because of the ease with which he can brush the floors. With the linseed-oil base it is necessary to apply the floor oil more frequently than where the floor oil is applied to the bare floor.

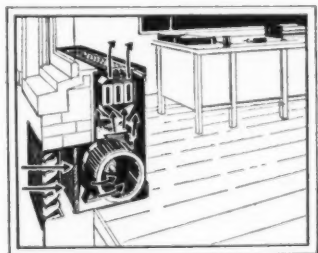
During the last Christmas vacation, the janitor of one of our newer buildings oiled a strip of

(Concluded on Page 148)



A Thermometer registers temperature *only*

... it cannot register the condition of the air in your classroom !



IT tells you how warm it is—but it can't register impurities. A thermometer may indicate a healthy temperature but it doesn't warn you of a dangerous draft.

But engineering science has provided heating and ventilating apparatus by means of which indoor air is kept clean, comfortable and SAFE at all times—regardless of the weather! A Sturtevant Unit Heater-Ventilator brings outdoor air indoors...filters it clean of dust...warms it to the desired temperature and discharges it evenly and comfortably... It assures a WARM CLASSROOM ... AIRY yet DRAFT-FREE!

Sturtevant Heater-Ventilators are particularly suitable for school installation because they are SILENT...because the controlling mechanism is simple and dependable—it may be either entirely automatic or each unit equipped for individual manual operation.

Actual photographs showing many unit-heater installations in schools, old and new, are found in our new U.V. Catalog No. 361. It will be a pleasure to mail you a copy on request.



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Our nearby Service Man will gladly show you how Oakite saves time and work and lowers the cost of cleaning floors, walls, woodwork, windows, desks and other equipment. You assume no obligation by asking us to have him call.

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Industrial Cleaning Materials and Methods

Oakite Service Men, cleaning specialists, are located in the leading industrial centers of the United States and Canada.

(Concluded from Page 146)

well-cleaned maple with linseed oil. To the balance of the floors he applied the usual midyear coat of floor oil. The strip oiled with linseed oil stands out today with a pleasing amber color, showing the grain of the wood to good advantage. It has withstood one thorough scrubbing.

When linseed-oiled floors are scrubbed, care must be taken not to use too strong an alkali solution. Linseed oil is a saponified oil—that is, it contains radicals of fatty acids and glycerine in combination. Under the influence of alkali it is decomposed; glycerine is liberated, and soap is formed. Under the influence of light, linseed oil bleaches out, the brown tone disappearing, and the yellow also becoming reduced in intensity.

After a season's wear of the floor which had been treated with linseed, we attempted to apply another thin coat of hot linseed oil on spots that showed wear from the children's shoes. The application was not successful, except in a very few places where the surface had excessive wear.

Linseed oil when applied hot, penetrates wood pores, and in four days becomes dry. In a few days more, it becomes hard, like a varnish, except that it is in the wood instead of on the surface. It was our experience that the portions of the floor which were not excessively worn did not absorb the oil. The oil consequently dried on top and formed a tough blistered coat, which became very susceptible to retaining all the dirt which came in contact with it.

At the close of this school year, when these floors have been scrubbed again, we shall again test out the surface to see if it will take a light coat of linseed oil before the usual floor oil is applied. As rapidly as possible, as our maple floors are scrubbed, linseed will be applied. Then the floor oil or sweeping compound will be applied as needed.

Now, just a word about soaps. There are soaps and powders of all colors, odors, and strength. Some are pure and others are purer. Some are guaranteed not to injure the finest fabrics, or painted surfaces, or to burn the skin. Others are guaranteed to clean and disinfect. Still others are guaranteed not to contain any free alkali, and finally, some are sold as being 40 per cent anhydrous.

No soap is made without some alkali reaction. If a soap is finished with the acid content predominating, it will in time sour or become "strong." The purpose is to balance the acid and alkali to approach neutral. For fear that the soap may have a trace of fatty acid, the general practice is to add just enough alkali to make the reaction definitely alkaline.

A simple test will reveal the comparative strength of liquid soaps. Fill a graduated pipette with the soap, then measure out two equal quantities of water, say, 50 cc. each. Drop into this 50 cc. of water, a few drops at a time, and shake well. Keep adding a few drops at a time until the soap produces free suds on the water. Record the amount of soap used. Apply the same treatment to the other 50 c.c. of water with the second brand of soap, and record the amount of soap used to form free suds. The relative amounts of soap used to produce free suds is in indirect proportion to the strength of the soap.

Soaps may also be tested for glucose, which is often used to give the soap a thick and even jelly-like appearance. Any high-school chemistry teacher can make the glucose test.

SOME HIGH LIGHTS OF THE PITTSBURGH SURVEY

The members of the Pittsburgh board of education received high praise for their service to the city in the findings of the survey of the school system undertaken in July, 1928, by a committee headed by Dr. Thomas E. Finegan, and assisted by Dr. H. S. Weet of Rochester, N. Y., and Dr. John W. Withers of New York University. The

survey was one of the most unique studies ever undertaken. It provided for a complete study of the school system, utilizing the staff of the superintendent's office, the teaching, and the supervisory staffs.

The survey committee praised the members of the board for their services to the city, giving the credit for the sound policies to the wise and sympathetic manner in which Supt. W. M. Davidson had executed each task. The method of selecting school-board members was commended as entirely sound and efficient.

In approving the Wooldridge school-building studies, the committee pointed out that this work is in line with policies recognized as sound in the organization and administration of city-school systems throughout the country.

In a study of the work of the school principal, the committee dwelt at length on the duties of the principal, his value to the community, to the board, and to the superintendent of schools, and urged the establishment of new qualifications on a higher plane than has previously been the rule.

The progress made in the improvement of qualifications for the teaching and supervisory staff was commended, and the suggestion was made that higher qualifications be adopted for new entrants into the service, in order that a more definite plan may be used for inducing teachers to meet the advanced qualifications.

The school system in general was commended for the fine spirit of community cooperation which was in evidence, and for the fine cooperation in evidence among the leading city organizations. The committee emphasized that the maintenance of the administration of schools in the future depends to a large extent upon a continuance of this interest of the public in its schools, and upon the continued appointment of men and women of a high type as members of the board of education.

—Corsicana, Tex. The school board has recently adopted a new rule providing for cumulative sick leaves for members of the teaching staff. Under the rule, teachers may receive full pay for five days of absence because of personal illness, or serious illness or death in the immediate family. In addition, such teachers will be paid one third of their salary for a period not exceeding thirty days. The unused days may be cumulative for a period not exceeding three years, or fifteen days.



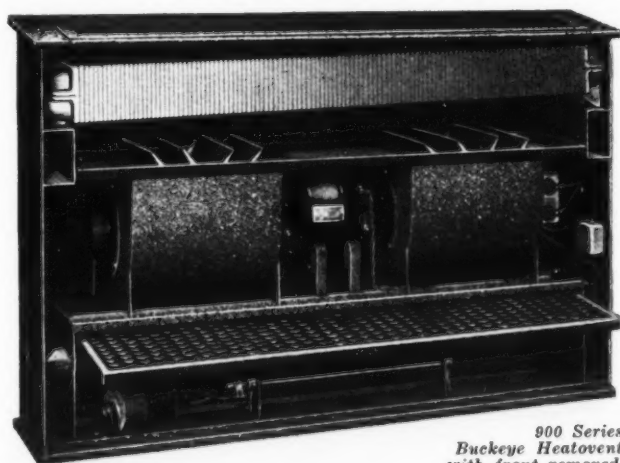
Heating Contractor: A. S. Garvey, Erie, Pennsylvania

"Known by the Company it Keeps"

The beautiful and dignified new Strong-Vincent High School to be built in Erie, Pennsylvania, is typical of the fine new school buildings that are ventilated and to be ventilated with the

900 SERIES BUCKEYE HEATOVENT

the heating and ventilating unit that performs its full heating duty in sub-zero weather without cold drafts, and yet does not overheat in mild weather. The 900 Series Buckeye Heatavent represents a distinct achievement in the field of unit heating and ventilating.



900 Series Buckeye Heatavent with front removed.

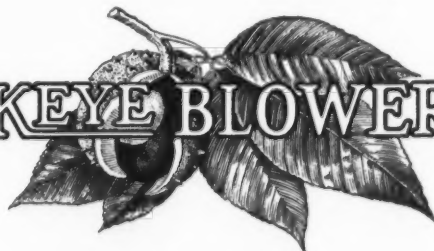
WRITE FOR BULLETIN 124

The 900 Series unit is designed for automatic control through any approved standard automatic temperature control system. It projects only 9½ inches into the aisle and is only 34 inches high. Time tested Buckeye Multiblade Fans impel fresh air through the Buckeye Sectional Copper Tube Radiator and diffuse it throughout each room without draft.

A pictorial bulletin, including cross section views, installation details, capacity tables and dimensions as well as a complete word description of design, installation, operation and results is ready for distribution. Write for your copy.

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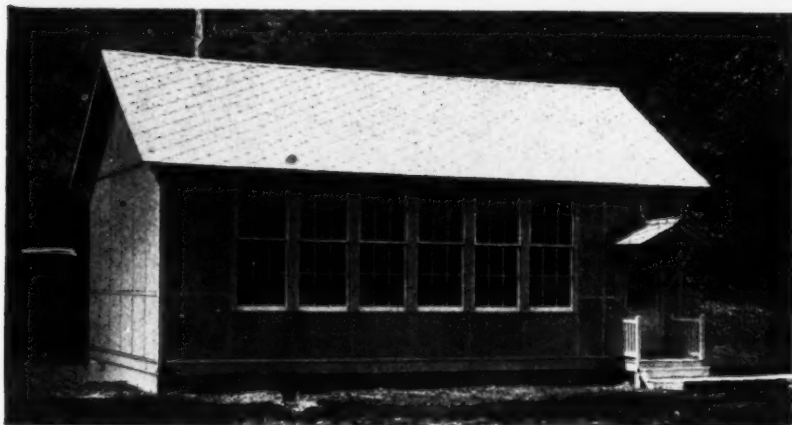
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All of these essentials you will find in Ambler schoolhouses. And the only other way you can secure them—including fire-safety—is in a masonry structure.

There are times and places for masonry buildings. But there are hundreds of cases where the enormous cost is not necessary and very inadvisable. Before you add schoolroom facilities, learn all about Ambler advantages. The informative catalog is yours on request.

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*Let Huntington's
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Don't take chances...consult with our chemists who have made a study of all types of flooring. Let us recommend the scrub soap that will give you greatest satisfaction.

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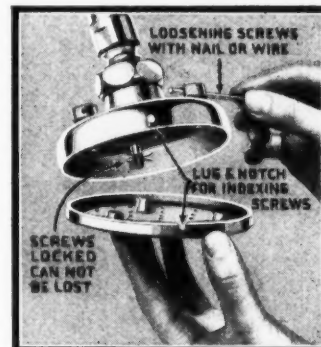
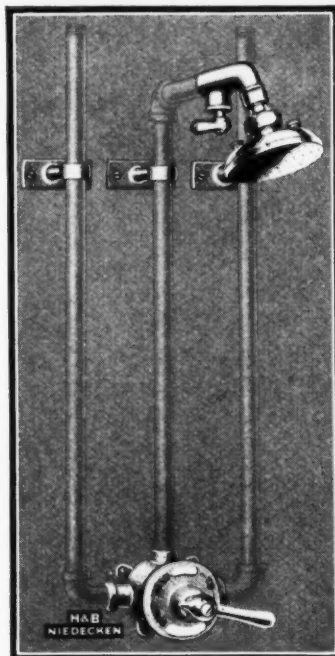
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The Easy Clean
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Piping is furnished by erecting plumber and can be finished with white enamel paint or aluminum bronze.

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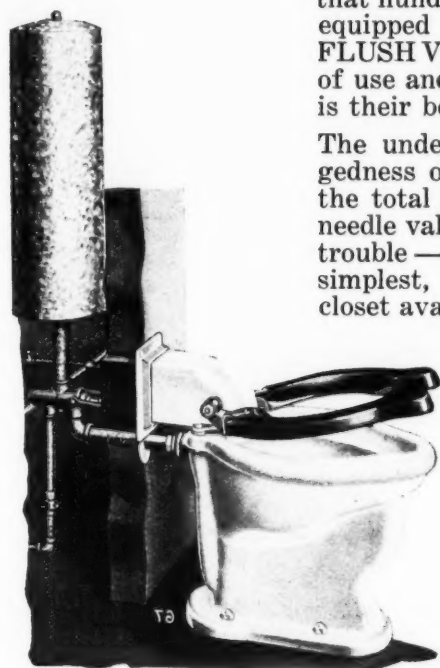
As the PIONEERS in the drinking fountain field, we are able to advise soundly regarding the best type of fountain for your use. We have just prepared a finely illustrated catalog which shows the complete line of school fountains. YOUR COPY IS HELD FOR YOUR REQUEST. WRITE FOR IT.

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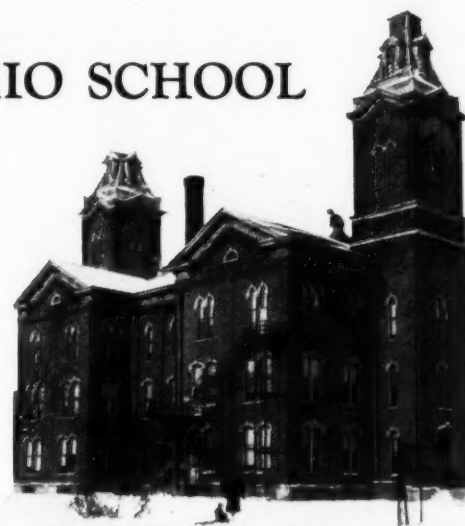
15 YEARS OF SERVICE IN THIS OHIO SCHOOL



No other application can equal school use as a measure of utility. The fact that hundreds of BOWLUS CLOSETS equipped with the famous JEWEL FLUSH VALVE have withstood years of use and abuse by carefree children is their best indorsement.

The underlying reason for the ruggedness of the Jewel Flush Valve is the total absence of interior springs, needle valves, and all other sources of trouble — making the BOWLUS the simplest, most reliable, seat-action closet available.

Modern sanitary engineering favors the utility room idea in schools. The illustration shows the patented Jewel Flush Valve and the vitreous china vent conduit which conducts foul air from the bowl into the utility room from which it is removed by an exhaust fan. All piping is within the utility room and accessible without damage to walls or floors. The ideal installation wherever more than one closet is set in a series.



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25 Bowlus units installed in 1914

The Plumber who made the installation says:

"I have not been called upon to repair a single closet. I consider them the best closet for school purposes I have ever seen, and cannot recommend them too highly."

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Write NOW for descriptive literature concerning BOWLUS closets and the famous JEWEL Flush Valve.

The BOWLUS MANUFACTURING CO.
Springfield · Ohio

SCHOOL BUSINESS ADMINISTRATION—I

(Concluded from Page 38)

educational specifications under which the schoolhouse is to be built, the architect is not thereby relieved of full responsibility for proper design and details of construction, beauty of elevation, economy in cost, elements of structural detail, and other purely architectural matters.

While modern school organization makes the superintendent fully responsible for the financial budget required to operate the school system, the auditor is not thereby relieved of full responsibility for the bookkeeping and accounting system, and the keeping of budgets.

While modern school organization makes the superintendent fully responsible for the efficient operation and maintenance of the physical school plant, the business superintendent or some other official of equivalent rank is not thereby relieved of full responsibility for the details of janitorial-engineering management, building repairs and maintenance, the purchase, storage, and distribution of supplies, and all other purely business functions.

A superintendent does not need to be an architect, a financier, an accountant, a realtor, or an engineer. It is necessary, however, that he be a good administrator and executive, and possessed of good managerial ability. His primary interest is in the education of the children, but he should know enough about all other correlated activities to administer them efficiently as a whole and to the best interests of the pupils and the community.

Cost as a Factor in School Building

Cost (16) is a word which has become very prominent in modern school literature. It represents a synthetic factor entering into every division, subdivision and phase of modern school administration. It is, at the same time, a composite factor of all divisions, subdivisions and phases. While the cost of school administration

should be worked out as a whole, the particular places where economies may be made will be found only by giving separate consideration to and analyzing each subdivision of a school system's activities and which cost is not revealed when the problem is viewed as a whole. To illustrate: If only the total cost of building construction is stated, no matter upon what basis this total cost may be based, whether cubic foot, square foot, classroom, pupil, or any other, it does not reveal where lack of economy may exist in some particular place in design or equipment. Nor are extravagances in construction, or lack of economy in design, revealed by simply stating the total aggregate cost of either mechanical or educational equipment.

So the question of economy must be studied as it applies to each separate subdivision of the problem, if the true situation as a whole is to be revealed. Cost accounting is, therefore, a science in which the modern school superintendent must be an expert.

A detailed analysis of all building costs, a picking to pieces of all the factors of cost entering into the design, plans, construction, equipment, construction superintendence, and the fees of the architect and engineer, often reveals places where economies may be made without lowering in any way the ultimate educational, architectural, and mechanical value of the building. Economies of this nature are the ones in which the superintendent and the board of education should be seriously interested.

There are many variations in the orderly and legalized procedure to be taken to arrive at the main issue of building a new schoolhouse and preparing it for occupancy and operation. The list of sixteen headings given at the beginning of this presentation has been chosen in the belief that it presents in logical sequence all the important subdivisions of the physical side of the

school system as differentiated from the instructional and financial side. These are the subdivisions with which the superintendent should be thoroughly familiar before he can be considered properly qualified to be the one-man head of the entire system and capable of administering his office in a highly efficient manner.

Bibliography

Should the School Secretary Be Under the Direction of the Superintendent, by George W. Gerwig, Secretary, Board of Public Education, Pittsburgh, Penna. Published in the SCHOOL BOARD JOURNAL, September, 1924.

A Reply, by T. H. Schutte, Oregon Normal School, Monmouth, Oregon. Published in the SCHOOL BOARD JOURNAL, December, 1924.

Relations of Business and Educational Departments in Local School Districts, by W. N. Decker, Secretary of the School Board, Altoona, Penna. Published in the SCHOOL BOARD JOURNAL, April, 1926.

SOME PRACTICAL PROBLEMS IN CONNECTION WITH SCHOOL-BUILDING PLANNING

(Continued from Page 44)

himself on the basis of the findings in these schools.

Table B gives similar data for class or recitation rooms. Here again the previous question presents itself. Table C gives us some information as to the use that is made of laboratories. The smaller schools are evidently using their facilities to excellent advantage; many of the rooms are used for recitation purposes, as must be the case on the basis of facts presented.

As stated, the actual capacities are given only for the median schools; those of the others differ but little from those given. Evidently we have still quite a way to go before we can definitely state that school buildings are efficient. But we need not worry much over this as an efficiency of 100 per cent is not attainable. But we are improving daily in this respect as our knowledge of school administration increases, and as studies



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Weighs Much Less

Made of aeroplane spruce, the Dayton Safety Ladder is many pounds lighter in weight than other ladders of equal size.

The Dayton Safety Ladder is solidly braced, has a folding auxiliary step for extra height, and its straight back permits close work against walls and in corners. It affords features of safety, convenience, and economy obtainable with no other ladder. Made in sizes 3 to 16 feet.

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of the finer points of the game are being made. Anything which is offered that will clarify our thinking here will redound to the good of the cause.

The Problem of the Smaller Schools

In conclusion the writer wishes to offer one more comment which seems pertinent. It refers to the real problems of the smaller communities and their school administration in the above directions. Access to the newer school-planning-engineering service is usually out of the question due to financial reasons, and it is nearly always up to the local authorities to work out their salvation with the help of an architect. Their problems are as important, or even more so, than those of communities much larger, and where finances rarely intrude themselves in as vital a manner. All help should be given these people through the professional press, by writers on this subject, by state authorities, and all others interested in the welfare of our schools, both public and private. It is hoped the remarks made in this article may serve to advantage in this direction and be helpful all along the line.

THE BEREA HIGH SCHOOL, BEREA, OHIO (Concluded from Page 51)

under lock and key at all times. The dressing-room arrangement makes it possible for the girls to dress and bathe in privacy, since each dressing booth, the aisle, and each shower are provided with heavy duck curtains which may be drawn when necessary.

In the planning and erection of the Berea high school, the school authorities avoided one blunder, that of completing a building before the equipment and furnishing had been worked out. In the case of this school, each item of equipment and furniture, especially the science furniture, was provided for on the first plans, drawn to scale. Gas, water, and waste connections were located for the particular purpose intended, and

as a result, no room is crowded or improperly equipped—the equipment fits the room in each case.

The building has been so planned that future extensions may be made, without any waste, remodeling, or bad effect on the rest of the building. In the plans, the cafeteria, the heating, and the mechanical units have been arranged so that they may be easily enlarged to accommodate additions which may be necessary to increase the capacity of the building.

The grounds surrounding the building have been landscaped. An athletic field with quarter-mile track and 220-yard straightaway has been completed, and a large space has been provided for soccer ball, baseball, football, tennis, and other field sports.

CONSTRUCTION DATA

Date bids received.....Sept. 15, 1926
Date contract awarded.....Sept. 17, 1926
Date building occupied.....Sept. 4, 1928

Building

Use.....Junior-senior high school
Number of classrooms.....13
Number of laboratories.....11
Library reading room.....1
Librarian's workroom.....1
Study rooms.....2
Fine arts room.....1
Music room.....1
Office.....4
Book storage.....2
Nurses' room.....1
Clinic.....1
Girls' restroom.....2
Teachers' restroom.....5
Auditorium.....85 by 60 ft.
Seating capacity.....1,150
Gymnasium.....80 by 52 ft.

Design and Construction Materials

Exterior design.....Elizabethan
Exterior facing.....Limestone
Exterior trim.....Stone
Construction material.....Brick
Corridor and stair finish.....Quarry tile
Classroom finish.....Dark oak
Auditorium finish.....Calif. stucco, dark oak
Gymnasium finish.....Interior face brick and white tile

Mechanical Equipment

Type of heating and ventilation.....Unit system
Temperature control.....Automatic
Electrical equipment.....Intercommunicating telephone and fire-alarm system
Plumbing.....Modern system

Cost and Pupil Capacity

Cost of building.....\$650,000
Pupil capacity.....1,000—1,500
Cost of equipment.....\$50,000
Cost per pupil.....\$600
Cost per cubic foot.....37½ cents
Total cost per pupil.....\$650

WESTWOOD GRAMMAR SCHOOL AT NORTHLEACH, ENGLAND

(Concluded from Page 52)

boarding and cement floors. The domestic-science room is fitted up for the teaching of cookery, laundry, and sewing. The cooking range is fitted up at the end of the classroom, while the washtubs are along the window at the opposite end, and the tables which are used for baking and ironing are also made use of in the sewing and housecraft lessons.

The interior finish of the classrooms in the main building shows a paneled effect with the wallboards running to the floor and the junction between the floor and wall finished with a skirting board. In the laboratory the tables extend across the room and each table is fitted with two sinks. The balance table is along the side of the room and next to the window. This table is specially suspended on the steel frame of the fabric so that any vibration of the floor due to the movement of the pupil does not affect in any way the results in weighing.

In the main building, ample locker accommodations for both boys and girls are provided, and the toilets are placed at the ends of the cloakroom. Over the boys' cloakroom the staff rooms are placed. The windows which are seen in the front of the building belong to the staff room, cloakrooms and corridors. The large steel windows which light the classrooms all face south and overlook the play fields.

The school is heated with radiators on the low-pressure hot-water system, the heating chamber being close to the boys' entrance with access from the corridors.



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TWENTY expert, responsible, well established concerns, whose addresses are listed below, offer you the fruit of intensive experience in the problems of damp-proofing and plaster key.

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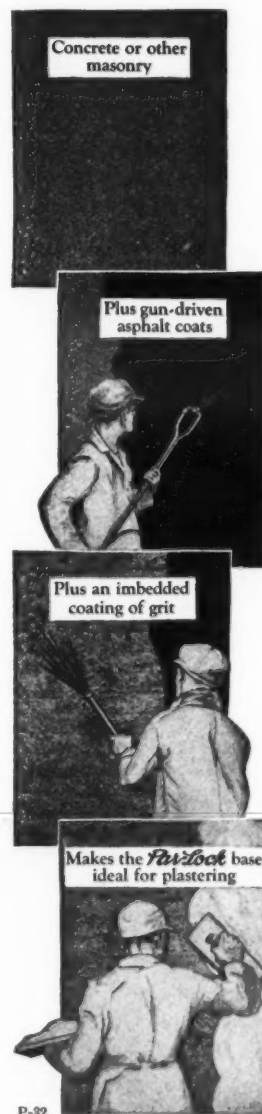
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As illustrated at the left, the auditorium receives the benefit of the gymnasium to use as a very large stage, thereby making the gymnasium more valuable because of greatly increased seating facilities, while each may be used separately if desired. This folding partition in the Bexley High School, Columbus, O., is 19 feet high by 60 feet wide.

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MILWAUKEE, WISCONSIN

A PLAN FOR THE SUMMER CARE OF SCHOOL BUILDINGS

(Concluded from Page 58)

furniture in several of the buildings was revarnished and repainted, several fire escapes were repainted, some slight repairs were made on the roofs of the buildings, and a concrete walk was laid at one of the buildings. A number of small carpentry jobs were carried out on the inside of the buildings, such as the construction of coat racks. During the last three weeks of the summer vacation, the buildings received a thorough inspection. All of the windows and doors were thoroughly washed and the brasswork polished. Necessary changes in seating were made at this time in preparation for the opening of the school year.

In the operation of the new janitorial plan, several advantages were noted. It was found that janitors who had been prone to slight portions of their work were good workmen when working with a group and were anxious to put the buildings in the best possible condition. Again, some janitors who appeared incapable of doing minor repairs, were successful in doing the work with the assistance of someone more experienced in the particular job. In working together in groups, the men exchanged ideas regarding ways of cleaning and standards of cleaning, and they were more happy in working together than they had been working alone.

After a year's trial of the new plan, it developed that the work could be carried out with fewer workmen. As a result, new contracts were arranged, with three of the janitors employed for the entire year, and three for nine months. Naturally, the men who made the best showing in the summer's work were selected for the full twelve months' schedule, while the others were placed on a nine months' contract. Under the plan, the board of education was able to obtain

additional labor to the amount of \$1,000. During the summer of 1929, it is estimated that the saving will be even greater, due to the fact that three of the janitors will be paid for nine months' work instead of twelve months as was the case this year.

HELPING TO SOLVE THE CLERICAL PROBLEM IN HIGH SCHOOLS

(Continued from Page 63)

shall be the duty of the chief clerk to study the clerical service, to expedite work, to recommend changes in methods of handling work, and to perform such additional services as may be assigned to her by the principal or his representative.

a) The high-school principals recommend: "There had been criticism concerning an inadequacy of clerical and administrative assistance. A careful investigation should remove the criticism so that high schools may be enabled to accomplish the best educational results. It is suggested that the establishment of a position to be known as head clerk, an examination grade, with appropriate salary, would prove a valuable factor in the supervision of office routine. A head clerk is an integral feature of the best organized business houses."

2. If the more detailed analysis of the clerical service made by the system would indicate a need for additional clerical service, it should be considered along the lines of more specialized, lower-priced classes.

a) There should be created in the high-school clerical service the positions of mimeograph operator and telephone operator to be selected in accordance with the rules, and to be given the salary grades of the municipal civil-service commission.

3. Minimum specific duties and responsibilities should be assigned to clerical workers.

4. Clerks should understand that assistance may be required in other than assigned duties at any time.

5. School organization should provide automatically to clerks any needed information at the appropriate time for use.

6. Definite planning of work for whole term should be a matter of administrative routine, and announced at the beginning of the term with definite date assignments.

Control of Amount of Clerical Work

One of the great problems in clerical work of teachers, and the clerical load on the school, was brought about by the fact that there was no control of its amount or the time when it was sought. For the purpose of exercising some control over clerical work, the following suggestions are offered:

1. That all requests involving clerical work be forwarded to the high schools *only* through the office or officer in charge of high schools so that this office may be conversant with the number and nature of these requests.

2. That the principal of a school either personally or through his chief administrative assistant shall study these requests for the purpose of distributing the work in such a way as to minimize the clerical effort required; and that the principal shall feel at liberty to raise with the office in charge of high schools a question of the purpose or value of any report or part of a report.

3. That requests for any *additional clerical work to be done by recitation teachers* be received by them only from the office of the chairman of the department in the school so that the chairman may control the number and the nature of these requests.

A final point of discussion was the problem of the hours of work of the clerical assistants, and

(Concluded on Page 156)

3 Reasons Why



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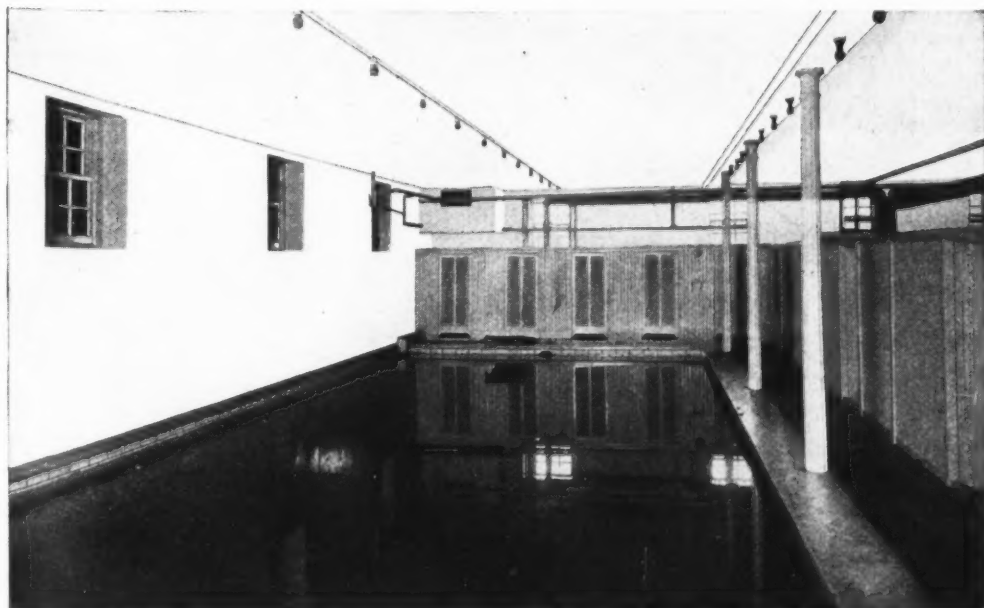
tile, again and again, without wearing away.

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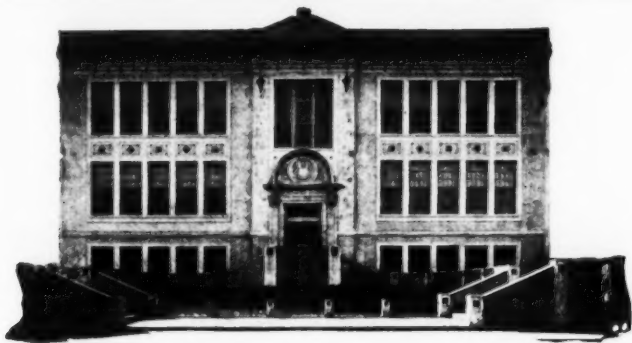
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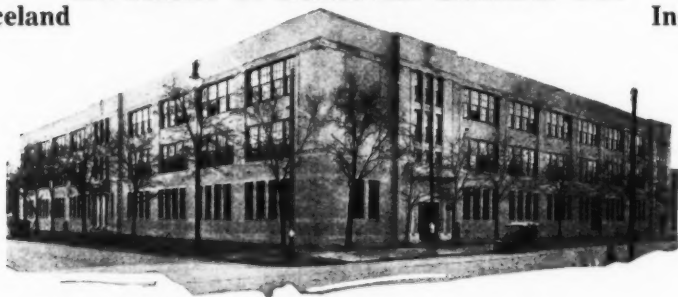
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Indiana



(Concluded from Page 154)

the length of the school year. In general it was felt that the standard for the clerical workers should be the regular standards for clerical work in offices, with some adjustment to the school situation.

1. The daily service of the clerk should be for seven hours.

2. Vacations and holidays allowed to the clerical assistants in the high school with pay should be:

- A month from July 15 to August 15
- Saturday afternoons throughout the year
- All legal holidays, and some part of the period during the Christmas and Easter vacation periods, including, of course, Christmas Day, New Year's Day, Good Friday, and the Jewish Passover.

INDEX OF SCHOOL-BOND PRICES

(Concluded from Page 66)

bonds. Bond prices have fallen almost as steadily since last April as stock prices have risen.

Table VI shows that there has been no great change in the price of all commodities in recent months. Building material on the other hand is substantially higher than it was a year ago.

TABLE VI
Revised Index Number of Wholesale Prices*

Past Twelve Months				Past Six Years	
Month	All Com- modities	Building Materials	Year	All Com- modities	Building Materials
1929			1928	97.7	93.7
Mar.	97.7 ¹⁰	96.8 ¹⁰	1927	95.4	93.3
Feb.	97.6 ¹⁰	96.7 ¹⁰	1926	100.0	100.0
Jan.	97.2 ⁹	96.6 ⁹	1925	103.5	101.7
1928			1924	98.1	102.3
Dec.	96.7	96.8	1923	100.6	108.7
Nov.	96.7	96.0			
Oct.	97.8	95.0			
Sept.	100.1	94.7			
Aug.	98.9	94.6			
July	98.3	94.4			
June	97.6	93.9			
May	98.6	93.5			
April	97.4	92.5			
March	96.0	91.0			

*United States Bureau
of Labor Statistics, 1926—
100.
¹⁰Not final.

NEW YORK CITY REDUCES FATALITIES OF PUPILS ON STREETS

The annual report of the New York City police department, recently received by the board of education, shows that the death toll of pupils under 16 years of age decreased from 408 in 1927 to 325 in 1928, despite the annual increase in accidents, hazards of the city streets and the enormous growth in school population. Credit for the reduction is given largely to the cooperation in safety work with the police department through the work of the principals and teachers under the direction of Supt. W. J. O'Shea of the city schools.

As evidence that the consistent work of the principals and teachers in the direction of safety teaching has been effective, the report points out that of the 325 children killed in 1928, 131, or over 40 per cent, were 6 years of age or under. These children not being of school age, did not come under the supervision of the schools.

The fatalities classified as to ages were as follows:

Under 4 years, 60; between 5 and 6 years, 71; between 7 and 8 years, 62; between 9 and 10 years, 68; thereafter there was a drop in the number killed as follows:

Between 11 and 12 years, 33; between 13 and 14, 22; and between 15 and 16, only 9. This distinct decline indicates both that the children have become "street wise" and that the safety educational work has become effective through continuous repetition.

The principal causes of accidents, fatal and otherwise, were "crossing not at crossings," "stealing rides," "coasting on sleds or toy wagons," "roller skating," and "bicycle riding." Ninety-three were killed and 3,274 were injured through playing in the roadways or because they ran off the sidewalks.

LAYING DUST ON SCHOOL GROUNDS

A recent issue of Parks and Playgrounds presents the following discussion on the use of calcium chloride for laying dust on playgrounds.

The past few years have witnessed an amazing expansion in the use of calcium chloride for laying dust on all kinds of outdoor surfaces used for recreation and various forms of outdoor activity. To anyone not familiar with the characteristics of this inexpensive material, its use will provide a pleasing revelation in the way it gets rid of dust and at the same time improves the condition of the surfaces on which it is applied.

For these purposes calcium chloride is not a new or untried product. Many years ago it was introduced as a dust layer and surface binder for gravel roads. Since that time its adaptation to similar purposes in other fields has proved so satisfactory that today it is used on public and private driveways, tennis courts, playgrounds, polo fields, flying fields, bridle paths, and playing fields of all kinds.

The use of calcium chloride offers many advantages over other dust laying methods. It eliminates the necessity of constant sprinkling because it attracts enough moisture from the atmosphere to keep surfaces in ideal dustless condition for use. It adds further to the healthfulness and beauty of any natural setting by preventing unsightly weed growth.

In spite of the fact that it is harmless to human beings and animals, and has no effect on clothing, rackets, tires or equipment, it nevertheless kills the bacteria which are ordinarily present in dust.

Calcium chloride does not stain or track and surfaces can be used while it is being applied.

The application itself is a simple and inexpensive matter. Skilled labor is unnecessary. An ordinary shovel will serve for spreading on small spaces and for larger areas the use of a special spreader makes the job speedy and economical.

If you are faced with the problems of maintaining surfaces and getting rid of dust, investigation of the possibilities of calcium chloride will reward you with a great deal of valuable assistance and information.

IMPORTANT SCHOOL-BOND SALES During the Month of February, 1929

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New Jersey, Nutley, School District.....	320,000
New York, Gloversville, School.....	320,000
New York, Horseheads, Union Free School District No. 4.....	265,000
New York, New York, School Construction	4,100,000
New York, Poughkeepsie, School.....	300,000
New York, Rochester, School Construction..	275,000
New York, White Plains, School.....	1,750,000
North Carolina, Greater Greensboro School District	1,300,000
Ohio, Hamilton, City School District.....	425,000
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Oregon, Multnomah Co., School District No. 1	1,000,000
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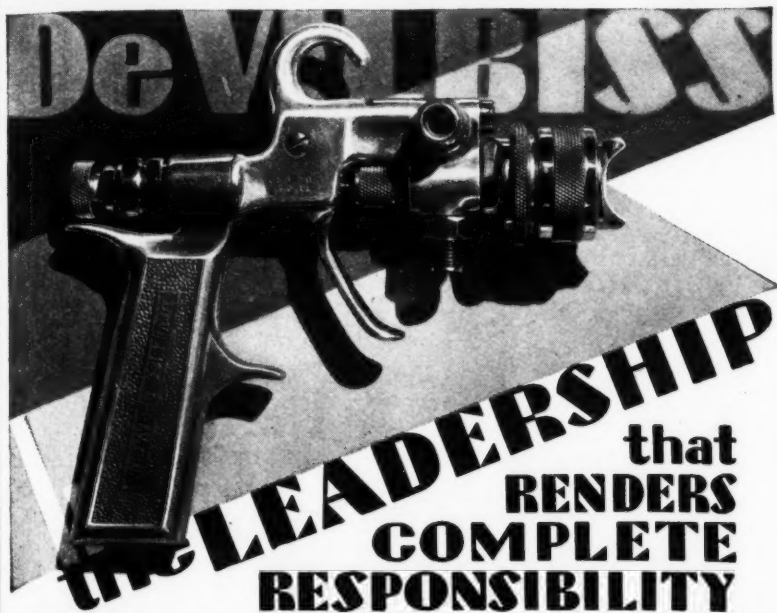
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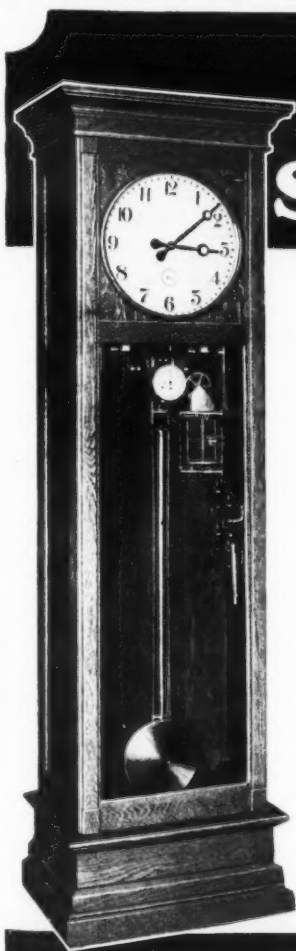
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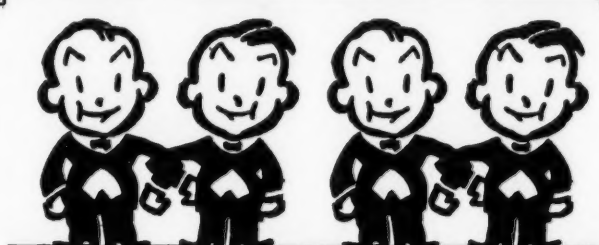
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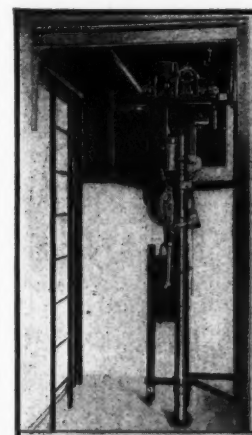

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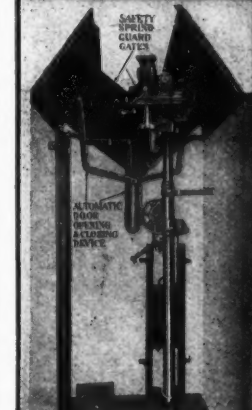
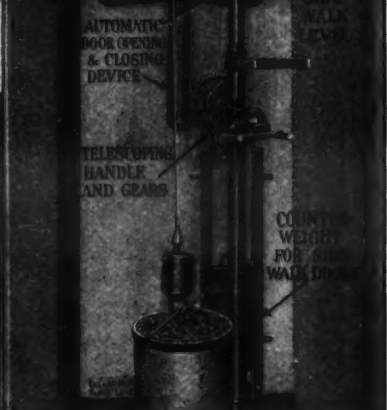
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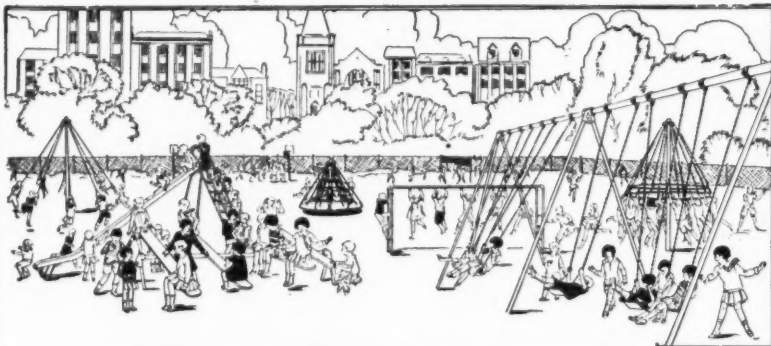
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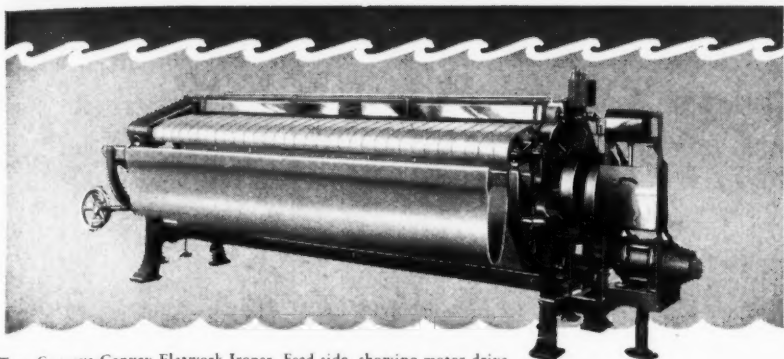


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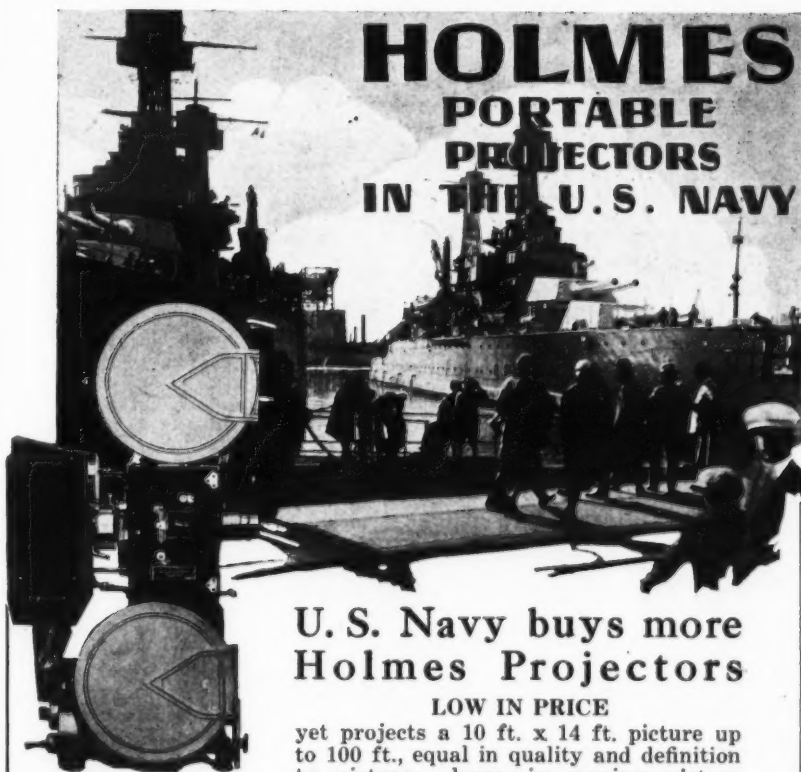
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PUBLICATIONS RECEIVED

Standard Form of Competition Program and Circular of Information for Competitions. A. I. A. documents Nos. 213 and 219, American Institute of Architects, Washington, D. C. The standard form of program outlines those provisions which the Institute considers essential to the fair and equitable conduct of a competition. The program contains rules for the conduct of the competition, instructions for the competitors, and the agreement between the owner and the competitors.

Uniform Cost Accounting for Schools. By Herbert N. Morse and Charles D. Anderson. A reprint from The American School and University for 1928-29. The pamphlet points out the need for uniform cost accounting and describes a practical uniform classification of accounts, together with a series of forms and their use.

Finance Procedures. A study of techniques in accounting, budgeting, and service of supplies as carried out in the schools of Hamtramck, Mich. Cloth, 160 pages. Research series No. 3, 1928. Issued by the board of education at Hamtramck, Mich. The book is the result of a careful study of the needs and problems of the schools as revealed in a self-survey of the school system. It is the third of a series of research studies, dealing with the subjects of accounting, budgeting, and service of supplies.

The study was made by Mr. Phillip C. Lovejoy and covers such important topics as internal accounting, payroll procedure, cost procedure, budget procedure, and service of supplies, textbooks, and equipment. The book includes a number of forms and tables developed for local accounting procedure.

Books like the present will do much to standardize school-accounting procedure to put it on an effective basis as an instrument for uniform reporting and educational betterment.

The Status of the Superintendent of Schools in Michigan. Paper, 87 pages. Prepared by Clarence Hendershot as a thesis for the degree of master of arts. Issued by the University of Chicago, Chicago, Ill. The study offers an analysis of the status of the superintendents and a comparison of the findings with those of similar studies. Among the factors considered are salaries, ages, tenure, academic qualifications, educational experience, and civic activities. The findings have been

compared with those of similar studies, one by Douglass for the country as a whole, one by Hornaday, and a third by Whitney, as well as a study of high-school principals by Eikenberry.

The study shows that in twelve years the average salary of superintendents in Michigan has increased from \$1,202 to \$2,589. Taking cities of from 2,500 to 5,000 and those from 30,000 to 100,000 population, the average salaries of superintendents in the state exceed those of superintendents of the country in general by amounts varying from \$437 to \$1,183. Since 1913, salaries have increased faster than the cost of living as is shown by the index figure for the latter which was 173.4 in 1927, while the index figure for 1927-28 was 228.2. Salaries have increased to such a point in the more responsible positions that they are capable of attracting men of the highest ability and training. It appears that the more responsible positions are open to the young men, but on the average, the age of the superintendent increases with the size of the school system. Apparently it is a case of the best qualified men being in the most responsible positions.

The data show that superintendents in the state are younger and have had less educational experience than superintendents in the country as a whole. They have had more academic training and are receiving better salaries. Compared with the superintendents of twelve years ago, the present superintendents have had four years less of teaching experience, almost twice as many of them have earned the bachelor's degree or better, and their salaries are more than twice as much.

Although 7.6 per cent of the superintendents report no educational experience, except in the superintendency, the average superintendent has served in three different kinds of teaching positions. There is a tendency for the diversity of the experience of the superintendent to increase with the size of the school system. The high-school principalship was reported most frequently by the superintendents, 51.6 per cent having reported service in that capacity. The high-school principalship was also reported most frequently as the last position held before entering the superintendency, 39.8 per cent having so reported. Although 51.2 per cent of the superintendents reported experience as a teacher in the elementary schools, only 3.3 per cent went from that position to the superintendency. The high-school principalship ranked first; the elementary-school principalship second; the head of a

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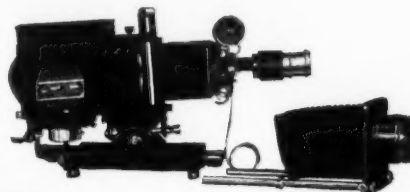
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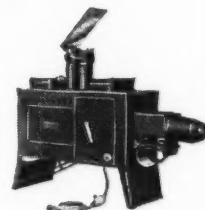
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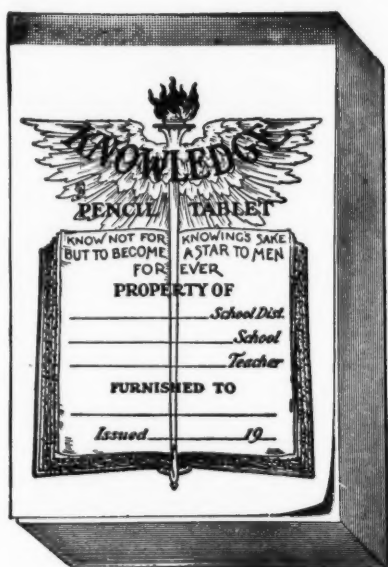
high-school department third; and the position of high-school teacher fourth, as approaches to the superintendency.

The percentage of superintendents in cities of 2,500 or more population, who hold the master's degree, or better, (62.6 per cent) exceed the average for the country (35.84 per cent) by 16.76 per cent.

A Retirement Plan for Colorado Public Schools. By Howard J. Savage and Edmund S. Cogswell. Paper, 67 pages. Bulletin No. 22, 1928. Issued by the Carnegie Foundation for the Advancement of Teaching, New York City. An adequate pension system is considered a necessity for the efficient and economic operation of any organization that employs a large number of persons. The interests of the pupils and of the public make the subject of pensions particularly significant in the field of education. The pension plan for the teachers of the State of Colorado is the result of a careful study of the needs of those concerned with public education, combined with a comprehensive knowledge of pensions elsewhere. The pamphlet discusses the organization and operation of the plan, the cost of administration, accumulations and benefits, and accounting of funds.

Functional Organization and Research. By M. R. Keyworth, superintendent of schools. Paper, 21 pages. Issued by the board of education at Hamtramck, Mich. The development of most city school systems has generally been a piece-meal evolution. Changing educational demands and needs have either lacked or not utilized the means for measuring their products. The approach to educational organization should be based upon the philosophy underlying public activity and should be the means to an end in the attainment of the objectives set up. The present booklet discusses the functional organization of school systems, taking up in detail the functions of each special branch of the system, and concluding with a discussion of the organization and preparation of the superintendent's report.

Architectural Woodwork. Document No. 1. Report of the Building Industry Group Conference of the Philadelphia Building Congress. The pamphlet is the first report of the conference dealing with the subjects of wood and lumber, priming and painting of millwork and woodwork. It is intended to offer the basis for a better understanding of good millwork and of the conditions surrounding estimating, manufacturing, and installing of woodwork.



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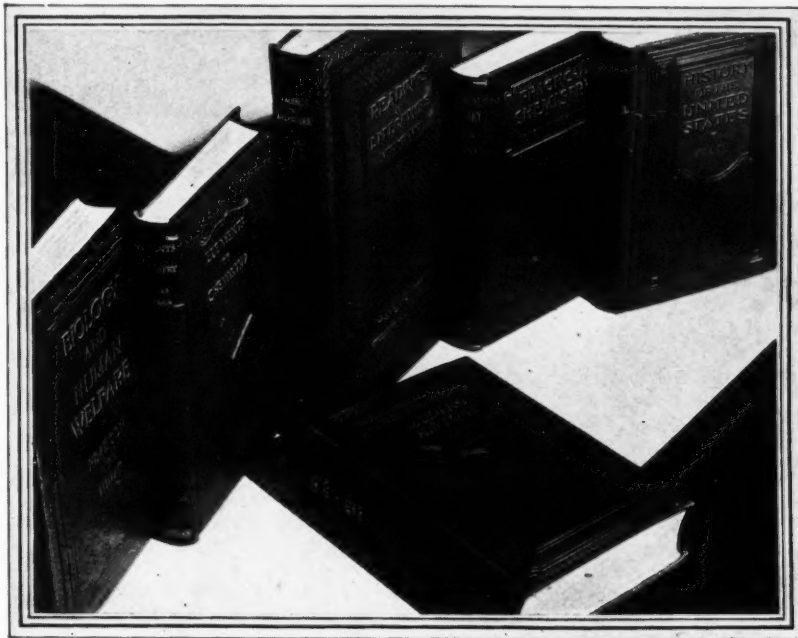
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Book News and Reviews

MR. FORESMAN BECOMES PRESIDENT OF SCOTT, FORESMAN & COMPANY

Mr. Hugh A. Foresman, one of the organizers and for many years vice-president and sales manager of Scott, Foresman & Company, has been elected president of the firm, to succeed the late Mr. E. H. Scott.

Mr. Foresman was one of the original organizers of the firm, which grew out of the organizations of Albert, Scott & Company and E. H. Sherwood & Company. The firm after its formation in the middle nineties, specialized in high-school and college texts, particularly in Latin and history. During the past 25 years, however, its lines have included practically the entire field of education. It has pioneered particularly in unified series of text and supplementary in reading and English literature.



MR. H. A. FORESMAN
President, Scott, Foresman & Co.,
Chicago, Ill.

Mr. Foresman is a native of New Jersey and was educated at Blair Academy and Lafayette College. After graduation, he taught near Lancaster, Pa., and then came west to enter the employ of Silver, Burdett & Company in the Michigan territory. In 1894, Mr. E. H. Scott, in the making of plans for strengthening his organization, induced Mr. Foresman to become a member of the firm, and the firm name was then changed to Scott, Foresman & Company. Mr. Foresman became vice-president and general manager of the sales department, which position he held up to the time of his present promotion.

Mr. Foresman was one of the early pioneers who put the selling of textbooks on a purely professional basis, and his sales policies, which dominated the firm, have been largely responsible for the firm's growth and for its leadership among the publishing houses of the middle west. In the 35 years that he held this position Mr. Foresman traveled widely in the interests of the business so that he became well known as a schoolbook man and attracted to himself a host of friends in all parts of the country. From a department in which Mr. Foresman did most of the agency work "with his two hands," the staff has grown to the extent that, in addition to the principal office at Chicago, there are now branch offices in New York, Atlanta, and Dallas, with a large force of men in the field covering practically every state.

H. D. NEWSON DEAD

Mr. Henry D. Newson, head of the educational department of Coward-McCann, Inc., publishers and long well known among publishers of textbooks, died at the Hotel Latham, New York City, on March 2, following an attack of heart disease. Mr. Newson was 75 years old.

For many years Mr. Newson had formerly been in charge of the educational department of Harper Brothers. Later he established the well-known firm of Newson & Company and originated the Aldine

series of readers widely used in the elementary schools of the United States. Since joining the Coward-McCann Company in July 1928, he had launched several successful publications.

NEW BOOKS

The Beginning Teacher

By John C. Almack and Albert R. Lang. Cloth, 478 pages, illustrated. Houghton Mifflin Co., Boston, Mass.

This is another addition to the textbooks suitable for the courses in introduction to teaching. The present volume, however, would also be of use in teachers' reading circles. The practical aspect of teaching is emphasized throughout and very little attention has been given to the theory of education. This is probably the best approach for those beginning the study of education. Some interesting features of the present volume are the materials dealing with the school library, community relationships, and directing the social activities. The newer technique in public playground experience is the basis for the discussion of the recess and intermission program. The chief elements in the teaching function stressed in this book are management and technique. Adequate provision has been made throughout the text for reviews, projects, discussions, and demonstrations to an extent that will fix permanently in the mind of the student the principles and practice of teaching. It is a book that can be wholeheartedly recommended to beginning teachers. It will put them in touch with the modern point of view and the best of recent scientific literature.

Better Schools

By Carleton Washburne and Myron M. Stearns. Cloth, 342 pages. Price, \$2.50. Published by The John Day Company, New York City.

This is a survey of progressive education in American public schools. The two authors, Doctor Washburne of Winnetka and Mr. Stearns, a journalist, are peculiarly fitted for the work. The progressive methods now in use in many American public-school systems have been studied at first hand by the authors. The point of view throughout is perhaps overly laudatory. Nevertheless, an attempt is made at objective criticism of existing practice. It is a book full of practical suggestions for teachers, superintendents, and members of school boards. Parents, too, who are following the new education, will find much to interest them in the present volume.

Civilization in Europe

By J. Selwyn Schapiro and Richard B. Morris. Paper, 738 pages, illustrated. Price, \$2.20. Houghton Mifflin Co., Boston, Mass.

This book intended as a survey course in western history for high-school students has many things to commend it. The authors who have written vividly and clearly have provided a wealth of illustrative material. The essential elements in ancient and medieval times are presented in Part I of the text. This provides the student with the proper historical background for a study of modern European history. Part II is the work of Doctor Schapiro. The new viewpoint in history is well exemplified here. Ideas are emphasized more than dates, the progress of culture more than the strife between dynasties, industrial revolutions more than the details of battles.

A professional historian could find a dozen instances of bias and positive misinformation in the pages of this book. Perhaps this is inherent in a text of this nature designed for secondary-school students. In the hands of the teacher, competent to tone down some of the prejudiced statements, the book will be of unquestioned value. It is a very teachable book. The questions, map studies, and thought questions appended to each chapter are bound to be stimulating.

Tests and Measurements

By Henry Lester Smith and Wendell W. Wright. Cloth, 540 pages. Price, \$3. Silver, Burdett & Co., New York and Boston.

The authors have attempted to gather together within the compass of a single volume all that the teacher needs to know about tests and measurements. The novel feature of this book is that the objectives of the teaching of a particular subject and the measurement of the results of this teaching, in so far as these results can be measured in the achievement of pupils, are brought together. With the rapid multiplication of tests in recent years there is need of some standard of evaluation. Such a method of evaluation the present book attempts to supply. All existing standardized tests

are listed, together with the price and publisher, and the author's opinion of their value. In addition to the tests for the special subjects, this same method is pursued with regard to intelligence tests, prognosis, special ability tests, and new type examinations. The book is invaluable for all teachers and administrators because of the aid it gives them to interpret tests in the light of established principles of educational measurement.

Soap Bubbles

By Ellen B. McGowan. Cloth, 248 pages. Price, 80 cents. The Macmillan Co., New York.

The author has called to her aid the newest theories of educational science and the most attractive devices of teaching the art to present "soap"—that bane of small boys—as a subject of school study. Correlations are made with elementary science, geography, history, and hygiene.

Enrollment in the Foreign Languages in Secondary Schools and Colleges

By Carleton A. Wheeler. Paper, 453 pages. The Macmillan Company, New York.

A detailed statistical study of the teaching of foreign languages, prepared for the American and Canadian Committees on Modern Languages.

Tiny Tail and Other Stories

By Kathleen B. Andrew, D. B. Prall, Daisy A. Bestor and May A. Hale. Cloth, 128 pages, illustrated. Price, 70 cents. Published by Beckley-Cardy Company, Chicago, Ill.

Twenty-one splendidly illustrated stories about squirrels, mice, and other animals that truly interest children. The stories are skillfully told and well adapted in vocabulary to advanced first grade or early second grade work.

Schorling-Clark-Potter Arithmetic Test

By Raleigh Schorling, John R. Clark, and Mary A. Potter. Test forms A and B, with keys and class record. Published by the World Book Co., Yonkers, N. Y.

This test is a complete revision of the survey tests for measuring achievement in computation, first published in 1923. Both forms have been carefully standardized.

French Pronunciation and Diction

By L. J. A. Mercier. Cloth, 156 pages. Silver, Burdett & Co., New York.

The author has brought together in this book the latest French research on pronunciation and accent, together with the best and latest research in the teaching of these two important elements of French. He has had thirty or more years of experience with American and European students and has produced a book that is at once economical of the student's time, comprehensive, and entirely teachable. The book should be equally usable in junior as well as in senior high schools. An interesting feature is a selection of poems and stories intended for rapid reading and expressive of vigorous articulation.

Modern Life Arithmetic

Book one. By J. G. Fowlkes and T. T. Goff. Cloth, 434 pages. The Macmillan Company, New York City.

A specialist in teaching arithmetic with long experience in successfully handling city and country schools has joined hands with a specialist in method and administration to prepare this third- and fourth-grade book as a part of a three-book series.

The book gives evidence of careful study of children's interests as well as of later adult uses of numbers. Work in abstract numbers has been studied for completeness and for emphasis on difficulties in combinations. Drill material is introduced with various devices that will insure interest and vigorous attention. The illustrations are a departure from the usual arithmetic text in that many of them are in three colors.

Statistics for Beginners in Education

By Frederick Lamson Whitney. Cloth, 123 pages, illustrated. Price, \$1.50. D. Appleton & Company, New York City.

This elementary explanation of educational statistics is ample to familiarize the normal-school student with the basic vocabulary and methods used by research workers and administrators. The presentation is vivid and the examples are well chosen.

The Branom Practice Tests in Elementary Geography

By M. E. Branom. Paper, 168 pages, illustrated. Price, 68 cents. Published by the Macmillan Company, New York City.

These forty-four lessons for the middle grades constitute a complete study outline and practice tests in introductory geography.

Drill and Work Book in Arithmetic

By Sister Mary Ambrose. Paper, 112 pages. Price, 60 cents. Beckley-Cardy Company, Chicago, Ill.

The 72 lessons embrace the four fundamental operations. Simple drill is varied by games, problems, and reviews having strong child interests.

Steps to Storyland

By Frances L. Taylor. Paper, 32 pages, illustrated. (Concluded on Page 165)

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Arithmetic Practice

By C. Beverly Benson. Books five and six. Paper, 128 pages. Price, 60 cents each. The Macmillan Company, New York City.

A feature of these complete drill books is a series of carefully studied diagnostic tests by which children may discover their own weaknesses and undertake remedial study. The present books are adjusted to seventh and eighth-grade work.

DeVault Primary Reading Test

Form I. Devised by Nellie M. DeVault. Price, \$1.50. Published by the Research Service Company, Los Angeles, Calif.

A group primary-reading test, issued in two forms, for primary children, particularly in grades one and two. The test was prepared by a teacher with long experience in primary teaching and is intended to serve the need for a diagnosis of reading ability, and to help in the classification and grouping of primary children. The words used are all first-grade vocabulary, arranged to provide a variety of silent-reading comprehension. The test has been standardized so that its norms are equivalent to the primary reading tests in general use. Directions are given for conducting the test, for scoring and judging the results.

The Music Hour

By O. McConathy, W. O. Miessner, E. B. Birge, and Mabel E. Bray. Cloth, 260 pages, Silver, Burdett & Company, New York City.

This teacher's handbook outlines the educational program underlying the Music Hour Series. Complete details for type lessons, monthly programs of teaching, piano accompaniments for the songs, and a group of fine rote songs for supplementary work distinguish this book.

A Report on Teachers' Salaries in Kansas for 1928-29. A fifth biennial report on teachers' salaries, prepared and distributed by the Kansas Bureau of School Service and Research, containing valuable information for administrators and school officials concerning teachers' salaries. The report indicates that the typical elementary teacher in the large city school system receives \$146 per month for ten months, or \$1,460 per year, and the typical rural teacher \$92 per month for eight months, or \$736 per year. The average monthly

salary of high-school teachers is lowest in cities of the third class, with a median salary of \$155 and a range of \$147 to \$169 in the middle fifty per cent. In cities of the first class (ten large cities) the median salary is \$202, and the range for the middle fifty per cent is from \$176 to \$225. For high-school principals, the median salary in third-class cities is \$220, and in second class cities it is \$245.

The trend of salaries over a five-year period is indicated in a comparison of the median salaries in 1924 with the same groups in 1929. It appears that the only marked trend toward an increase in salaries is in the salaries of high-school teachers of the first class, and high-school principals in cities of the second class, including community high schools. There has been no reduction of salaries during the five-year period.

A study of the tenure of teachers shows that there has been a turnover of approximately fifty per cent among the schools in which the salaries are low. Fifty-three per cent of those in one-teacher schools, and 44 per cent of those in cities of the third class were not teaching in the same positions last year. Only one in five of those in one-teacher schools, and one in three of those in third-class cities have been in their present positions as long as two years. In the high schools, it is noted the turnover in teaching staff is less than in the elementary schools, yet only half of the teachers in rural high schools and cities of the third class have been in their present positions as long as two years. This situation does not represent the sort of stability in teaching which is imperative for securing effectiveness and continuity of instruction or instructional policy.

A Silent Reading Test in French, Forms A and B. By M. E. Broom and L. P. Brown. Issued by the Research Service Co., Los Angeles, Calif. The test is intended to furnish a reliable, valid, and comparable measure of comprehension of the meaning of the printed language. It is practically self-administering and may be given in one sitting of twelve minutes. The sheet contains directions for the teacher, a description of the test, and instruction for conducting the test, together with a key for scoring and re-scoring the papers.

Witham Geography Test of the United States, Form II. Devised by Mr. Ernest C. Witham, Wilmington, Del. This is a new series of the Witham Geography test. The test is arranged in

the form of a geography game, comprising eighty points. The sheet contains directions for the teacher, the outline of the test, and instructions on scoring.

Practice Exercises in Reading

By Adele M. Mosseman. Paper, 16 pages. Published by the Research Service Company, Los Angeles, Calif.

This book is adapted for the use of classes where progress is hindered by a wide variation in reading ability.

Standard Specification Outline for Building Construction. Paper, 57 pages. Prepared by a committee representing the Michigan society of architects, the associated general contractors, the associated building employers, the general buildings' association of Detroit, and the Detroit chapter of the associated general contractors. Issued by the Associated Building Employers of Michigan. The specifications offer standard schedules governing the construction of floors, the kind of wall finish, the types of windows, type of door and trim, and other important features in a projected building. The booklet includes instructions to bidders, general conditions, and other matters governing the specifications for the architectural trades.

The Story of Books

By Alice Mary Kimball. Paper, 32 pages. Published by the A. T. Walraven Book Cover Co., Dallas, Tex.

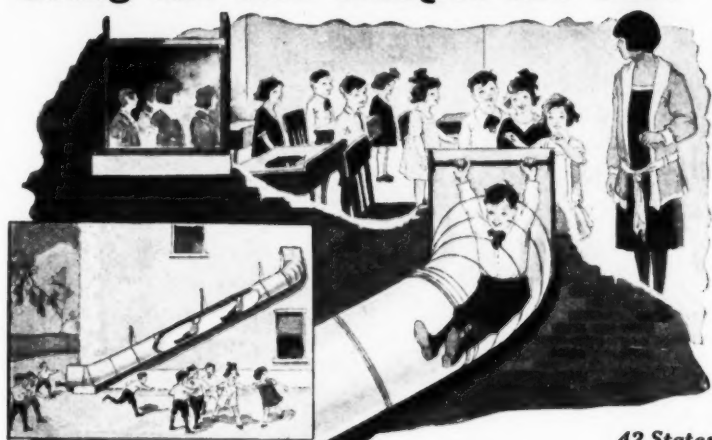
The story of the making of books is the story of the civilization of man. It becomes at once a romance most absorbing, since it shows the evolution in the making of books all down the centuries. A monk in his cell would make a book in 100 days; now great printshops have sprung up in which thousands of books are turned out in a single day. Modern presses and binding machinery have been used to good purpose in the production of large quantities of books.

The booklet tells how books came to be, discusses the landmarks in the ancient history of the book, and then tells of the vast variety of books available today, and of the care which should be accorded all books.

The material for the booklet was prepared by Miss Kimball, under the direction of Miss Sally Lucas Jean, and the silhouettes are the work of Miss Gillespie, a well-known silhouette artist. A brief bibliography on bookmaking is not in harmony with the high standard of the text in the booklet.

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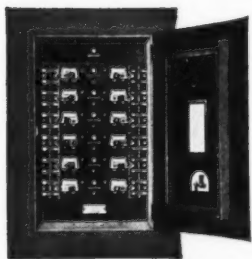
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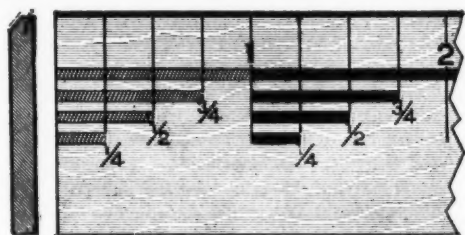
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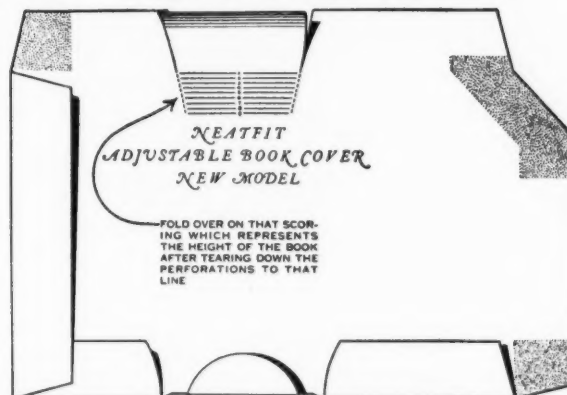
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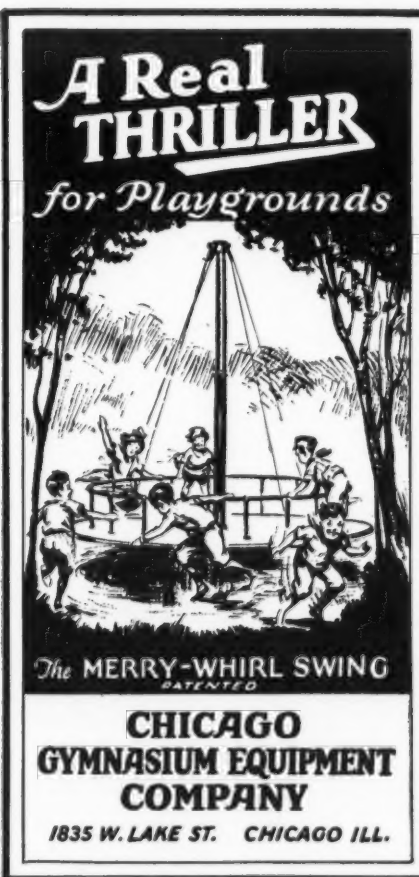
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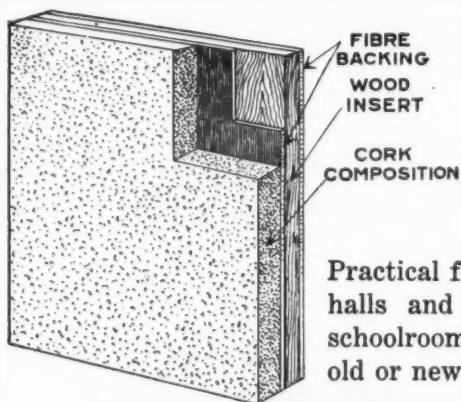
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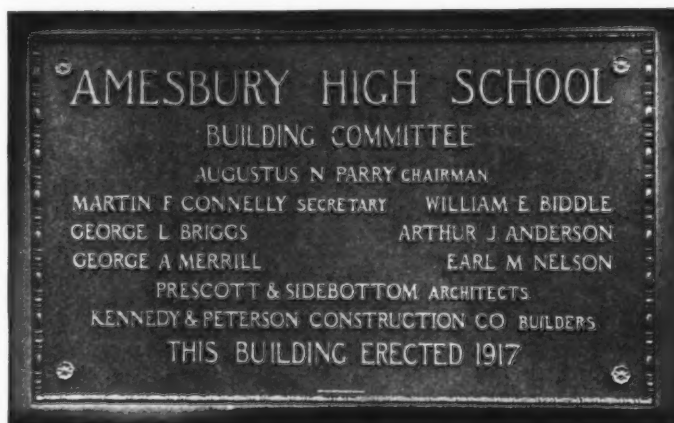
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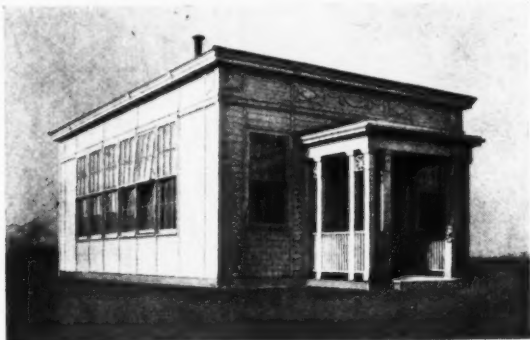
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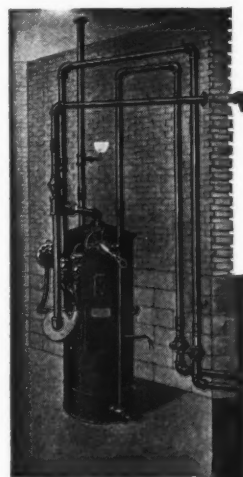
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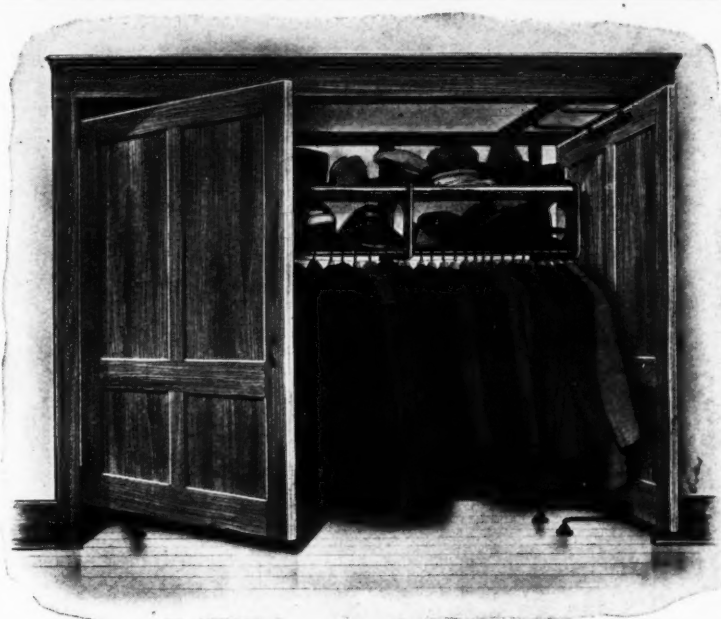
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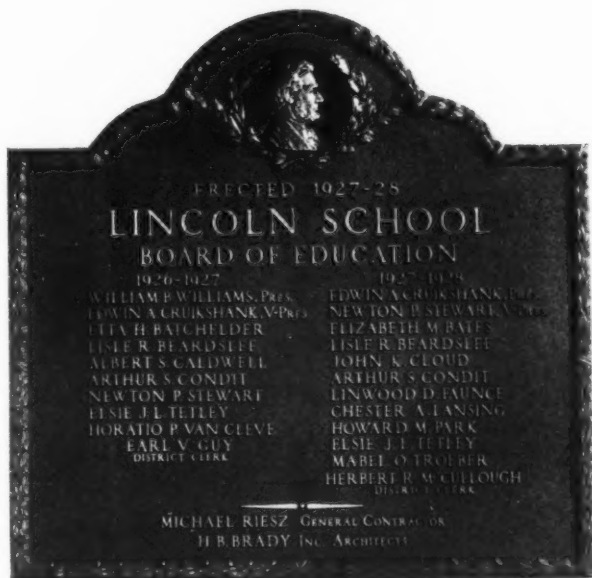
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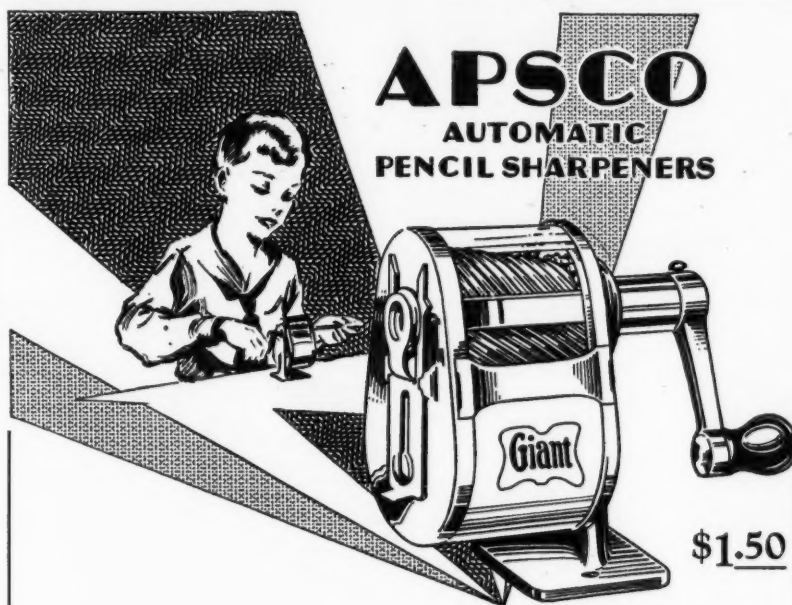
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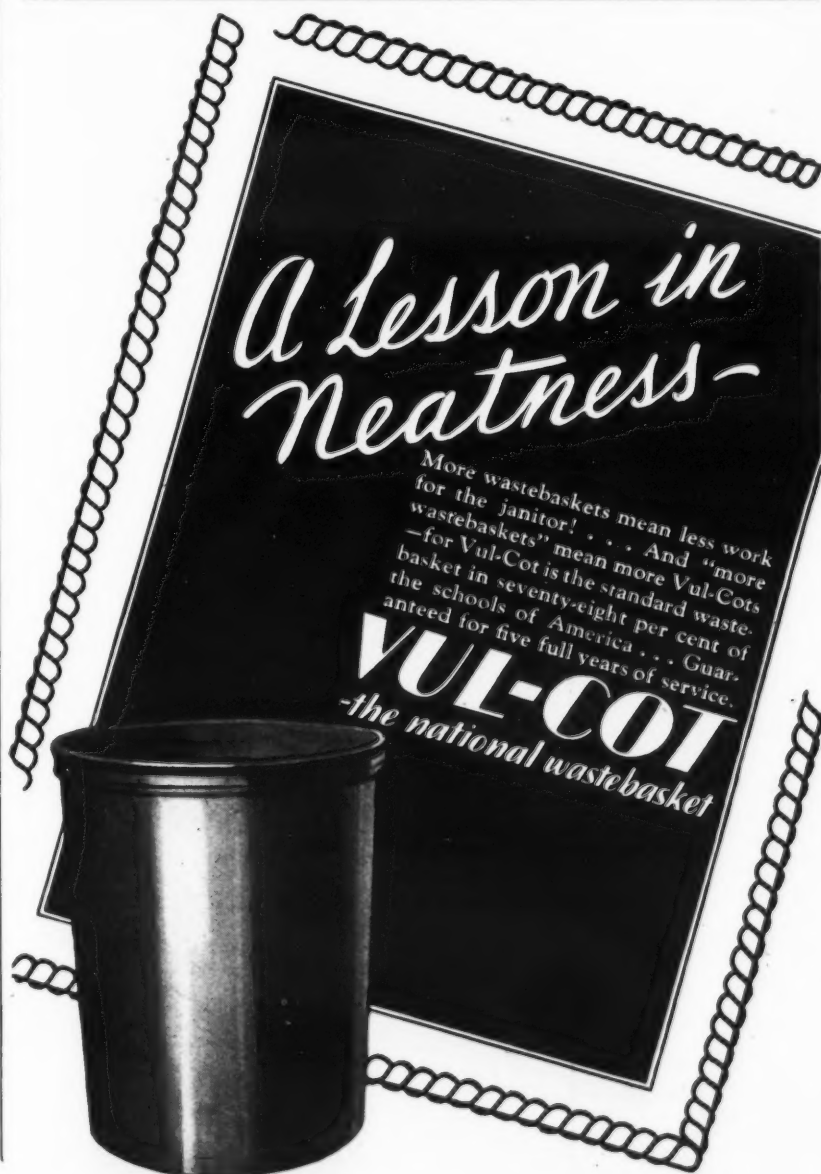
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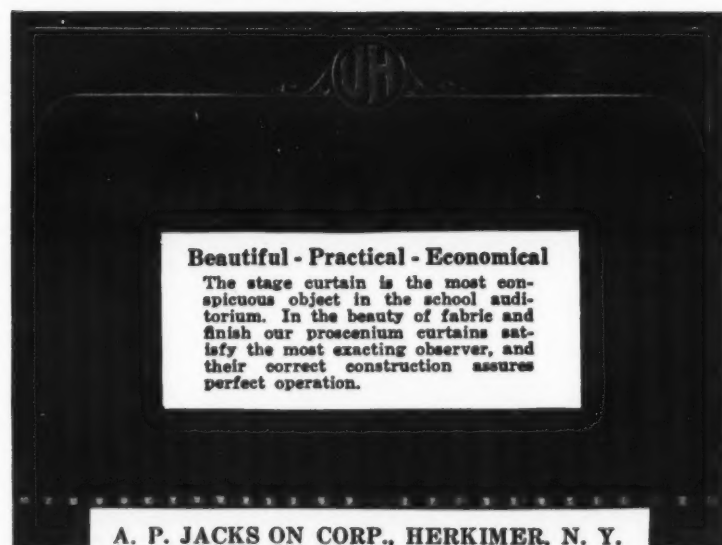
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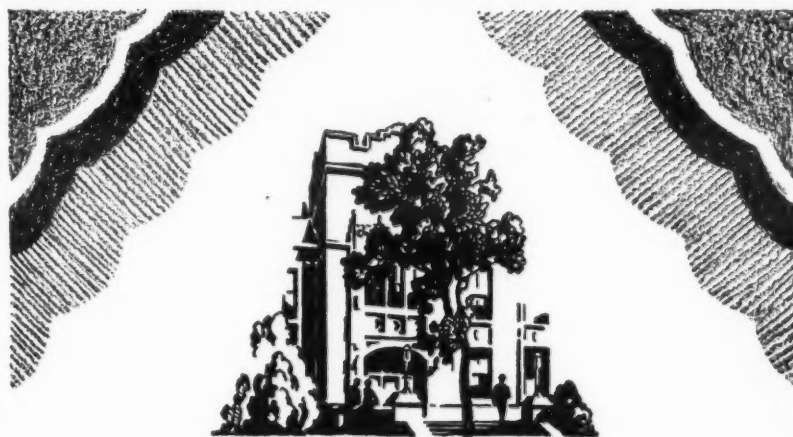
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Teacher Agencies Directory

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Dunham Company, C. A.

Nash Engineering Company

VALVES—FITTINGS

Bowling Manufacturing Co., The

Clow & Sons, James B.

Crane Company

VENTILATING SYSTEMS

Buckeye Blower Company

Nelson Corp., The Herman

Peerless Unit Vent. Co., Inc.

Sturtevant Company, B. F.

VENTILATORS

Sturtevant Co., B. F.

VOCATIONAL EQUIPMENT

Christiansen, C.

Columbia School Supply Co.

Kimball Company, W. W.

Sheldon & Company, E. H.

Wallace & Co., J. D.

Welch Manufacturing Company, W. M.

WARDROBES

Evans, W. L.

K-M Supply Company

Wilson Corp., Jas. G.

WASTE PAPER BASKETS

National Vulcanized Fibre Co.

North Western Steel Products Company

WASTE RECEPTACLES

Solar-Sturges Mfg. Co.

WATER CLOSETS

Bowling Manufacturing Co., The

WATER COLORS

American Crayon Company

WATER PURIFIERS

Clow & Sons, Jas. B. (R. U. V.)

Wallace & Tiernan, Inc.

WEATHERSTRIPS

Athey Company, The

WINDOWS—ADJUSTABLE

Austral Window Company

Detroit Steel Products Company

International Casement Co.

North Western Steel Products Co.

Truscon Steel Company

Universal Window Company

Williams Pivot Sash Company

WINDOW FIXTURES

Austral Window Company

Columbia Mills, Inc.

Peerless Unit Ventilation Co., Inc.

Williams Pivot Sash Company

WINDOW GUARDS

American Fence Construction Co.

Badger Wire & Iron Works

North Western Steel Products Company

Stewart Iron Works Co., The

WINDOWS—REVERSIBLE

Austral Window Company

Detroit Steel Products Company

Williams Pivot Sash Company

WINDOW SHADE CLOTH

Columbia Mills, Inc.

Du Pont de Nemours & Co., E. I.

Hartshorn Company, Stewart

WINDOW SHADE ROLLERS

Columbia Mills, Inc.

Hartshorn Company, Stewart

WINDOW SHADES

Athey Company

Beckley-Cardy Company

Columbia Mills, Inc.

Draper Shade Co., Luther O.

Du Pont de Nemours & Co., E. I.

Hartshorn Company, Stewart

Shade Service Bureau

WINDOWS—STEEL

Detroit Steel Products Company

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BUYERS NEWS

MR. DUFFIELD APPOINTED ADVERTISING MANAGER OF YAWMAN & ERBE MFG. COMPANY

Mr. D. W. Duffield, who has been in the school service department of the Yawman & Erbe Mfg. Company, has been made advertising manager of the firm. The promotion represents the firm's recognition of the splendid work which Mr. Duffield has been doing in the school field.

BERGER COMPANY ACQUIRES VAN DORN IRON WORKS

The Berger Mfg. Company of Canton, Ohio, has recently acquired the Metal-Furniture Division of the Van Dorn Iron Works of Cleveland. The Berger Company has acquired all of the metal furniture machinery, tools, and inventory in process, as well as all of the agency contracts. The acquisition of the Van Dorn line, with its equipment and sales organization, will strengthen the Berger Company's position in the trade, and will enable the firm to effect very material economies in manufacturing and administration.

The Van Dorn Company has a complete line of metal furniture and is a large manufacturer of metal lath, metal culverts, and other fabricated metal products, totaling in all about 4,000 items.

ANNOUNCE NEW TITAN LAUNDRY WASHER

The Troy Laundry Machinery Co., of Chicago, Ill., has issued an illustrated circular describing its Titan washing machinery for use in schools and institutions. The Titan is a monel metal washer, with a cylinder 44 in. in size, vacuum circulation, outlet valve, roller bearings, two-way inching, and full safety features.

The Troy Laundry Machinery Company will be glad to send complete information and prices to any school official who will write to them at 2231 South Parkway, Chicago, Ill.

NEW TOGAN CATALOG OF SCHOOLHOUSES

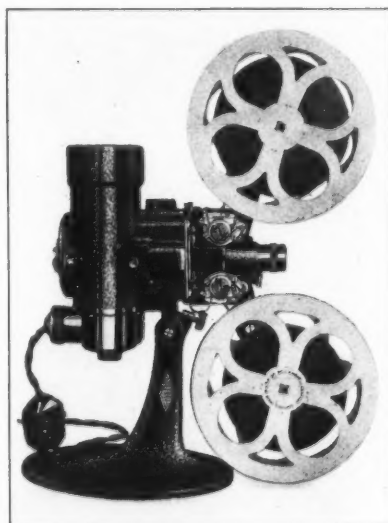
The Togan-Stiles, Inc., of Grand Rapids, Mich., has just issued a new catalog devoted to the construction of factory-built schools and gymnasiums. Togan schools are built complete in the factory and shipped to schools in sections of practical size. The schools are built for permanent use and permit of quick erection which affords immediate relief from overcrowded classrooms and contingencies resulting from fire losses and other reasons.

The catalog describes and illustrates one-room, two-room, three-room, and four-room schools, and includes complete specifications for the construction of the buildings.

Complete information concerning the Togan-Stiles schools may be obtained by writing to the Togan-Stiles Company at Grand Rapids, Mich.

A NEW SCHOOL PROJECTOR

A new 16 mm. projector has recently been announced by the Bell & Howell Company, Chicago, Ill., to meet the requirements of educational institutions. The machine which is known as Filmo 57-E



BELL AND HOWELL
SCHOOL PROJECTOR

school projector, is similar to the Filmo projectors used extensively by home movie makers and by industrial concerns. It differs largely in the technical details which provide for a maximum of illum-



MR. D. W. DUFFIELD
Advertising Manager of Yawman and Erbe Mfg. Co.,
Rochester, N. Y.

inating power and picture quality with a minimum of operations required for its use.

The projector is equipped with a 250-watt, 5-ampere lamp, a 45-50 light condenser, a perforated-screen safety shutter, which permits prolonged projection of a single picture or frame, without endangering the film, and a geared crank for speedy rewinding of the film after projection.

Other standard Filmo features which are incorporated in this model are: A nine to one shutter which produces brilliant, flickerless pictures, a perfected lubricating system insuring long service, a reversing lever for running the film backward, an extra belt for automatic rewinding, and provision for interchangeability of the projection lenses.

Thousands of films suitable for instruction purposes may be had in the 16 mm. size and the number of such films is rapidly increasing. Schools which appreciate the greater ease, economy, and safety of 16 mm. film, have equipped their visual education departments with suitable projectors.

Descriptive literature and prices may be obtained by an inquiry addressed to the Bell & Howell Company, Chicago, Ill.

NEW CLOW CATALOG OF PLUMBING FIXTURES

The new Clow Catalog No. 50, the latest edition of the James B. Clow plumbing fixtures is an interesting and useful reference book of information on sanitary fixtures and apparatus for school buildings.

The catalog contains 410 pages devoted to the description and illustration of a complete line of sanitary fixtures, including toilets, urinals, lavatories, shower baths, and drinking fountains. The first section devoted to school toilets lists the old standard Clow-Madden automatic syphon-jet water closet used so successfully in many schools, the Clow Durie and Baltic designed with low seats adapted for small pupils, the well-known wall types making it easy for cleaning, the Clow patented ventilator type permitting the easy repair of parts and adequate ventilation, a line of low-seat toilets, and a number of special types, showing wall and floor toilets, both with and without boxes. There is also shown a line of marble, steel, and galvanized closet partitions, together with a complete line of repair parts for school-toilet repairwork.

The section devoted to school urinals shows a complete line of porcelain, adamantose, and slate stalls, with typical plans for installation.

The third section contains a full line of wash-basins in porcelain and adamantose, in the pedestal, oval, and square wall-type, the Paragon type with integral back, and various types of corner and wall basins with integral backs, together with a special battery line of Gary type basins, in both the wall and open-battery type.

A fourth section shows a complete line of shower-bath equipment, including showers, shower stalls, and a complete line of parts.

A fifth section is devoted to drinking fountains in marble, terra cotta, adamantose, and cast iron, in the pedestal, wall, and range type. There are also shown a complete line of sinks and slop sinks, in a variety of styles and material, suitable for school use.

The book is beautifully printed on a fine quality of paper and is bound in brown DuPont Fabrikoid leather. It is a handsome example of catalog printing, and a complete reference book on sanitary fixtures for the architect and school official.

Complete information on the Clow line of sanitary equipment may be obtained by writing to the James B. Clow Company at 201 North Talman Ave., Chicago, Ill.

ISSUE BOOK ON CLEANING METHODS FOR SCHOOLS

The need for cleanliness in public schools is considered as important in the school life of today as is mental training and recreation. A new standard of cleanliness has been introduced with the advent of central cleaning systems.

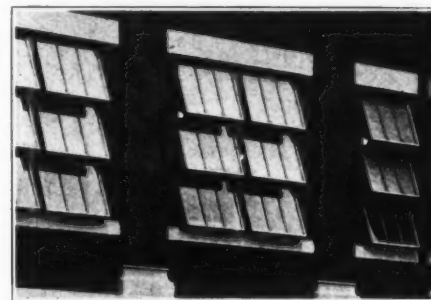
The Spencer Turbine Company of Hartford, Conn., has just issued an interesting illustrated booklet of 24 pages describing the installation and use of the Spencer cleaning system in schools. Numerous tests have proved that the Spencer system removes from 25 to 50 per cent more dirt in pounds under similar conditions than other methods. The Spencer system makes it possible to cover all surfaces better than with the brush, and to do it in a minimum of time. The Spencer system is quiet, does not spread dust, and permits the janitor to clean rooms while still occupied by the teacher and pupils. The Spencer tools are easily moved from room to room so that the janitor may employ his odd moments in cleaning various corners at his convenience.

The booklet contains a typical layout and plan for a vacuum cleaning installation, which will be useful for the school architect, building engineer, and school official in the installation of vacuum cleaning systems in schools.

School authorities and architects may obtain complete information by writing to the Spencer Turbine Company at Hartford, Conn.

NEW DONOVAN AWNING-TYPE STEEL WINDOW

An improvement in the Donovan awning-type of steel window, which has met the hearty approval of architects and school authorities throughout the country, has been announced by the Truscon Steel Company of Youngstown, Ohio, manufacturers of a variety of steel windows for school buildings.



A CLOSE-UP OF THE NEW DONOVAN WINDOW,
SHOWING HOW THEY MAY BE
COMPLETELY SHADED

The new Donovan school window is light and so simply constructed that a child can operate the two or three sashes composing the unit. The lower sash may be swung outward, and is capable of deflecting sun-glare, or drafts, and of admitting the maximum amount of light with any amount of fresh air. Where it is desirable, the upper and lower sashes may be operated independently, by simply releasing a small clutch on the top rail of the lower sash.



LINCOLN SCHOOL, LINCOLN, ILL., EQUIPPED WITH
THE NEW DONOVAN WINDOWS

The window is constructed of steel channel sections, welded together, and is provided with a special mechanism for affording flexibility of control. Protection against the weather is afforded by means of double contact and wide overlapping of sections all around. Cleaning of the sashes is quickly and easily accomplished, and the use of awnings is obviated through the use of shades attached directly to the sashes.

The price of the new window is so low that it is within the reach of any school, large or small.

WORLD'S STANDARD • THROUGH SERVICE



We are sending you, herewith, a copy of the new
 and revised instructions to the New York
 to enable us to make a comprehensive list of the
 probable future trend of the bond market, this position
 contains a well illustrated list of current long-term
 offerings.

If you are interested in making selections of the
 present, we should be glad to give you more detailed in-
 formation about any securities, and shall also be glad
 to aid you in making selections.

Yours very truly,
 [Signature]

UNDERWOOD
 No. 5

IN COMMERCE

SERVING both the village storekeeper and the merchant prince—a durable, dependable medium for recording details of distribution—the Underwood Typewriter is the World's Standard in speeding commerce through the traffic lanes of the earth. (No matter what your typewriter needs may be, there is an Underwood that will satisfactorily meet your requirements. (Ask our nearest representative to demonstrate the Underwood—the Machine that Speeds the World's Business.

UNDERWOOD

The Machine You Will Eventually Buy

♦♦ SALES AND SERVICE EVERYWHERE ♦♦

After the Meeting



SCHOOL BOY HOWLERS

An anachronism is a thing a man puts in writing in the past, before it has taken place in the future.

Cereals are films shown at the movies, and which last fifteen weeks.

Quadrupeds has no singular, you cannot have a horse with one leg.

Q. Explain "mortgage." A. When people do not wish their deceased relatives to be buried, they send them to a mortuary to have their remains mortgaged.

If the air contains more than 100 per cent carbolic acid it is very injurious to health.

Geometry teaches us to bisex angels.

The difference between air and water, is that air can be made wetter, but water cannot.

A line in geometry is what you draw and do not see.

Two straight lines cannot inclose a space unless they are crooked.

A circle is a round straight line with a hole in the middle.

Lumbago is a mineral used for making pencils.

A skeleton is a man with his inside out, and his outside off.

The inhabitants of Moscow are called Mosquitoes. Black clouds are formed by the evaporation of dirty water.

If 20 feet of an iceberg is above water, the rest is below.

An Equator is a difficult thing in algebra.

The earth makes a resolution every 24 hours.

The second kind of lakes are those of damned rivers.

The three states of water are high water, low water, and breakwater.

A meridian is the place where they keep the time.

The inhabitants of Paris are called Parisites.

There is a great deal of nothing in the center of Australia.

The earth is round and flattened at the corners.

A consonant is a large piece of land surrounded by water.

An autobiography is the life of an animal written after it is dead as a moral.

Q. What is the last letter of the English alphabet?—A. Yours truly (a Japanese pupil).

—Collected by H. Ainsworth

Waste of Energy

To a backward pupil the teacher said:

"If you never learn to write, how will you be able to carry on correspondence when you grow up?"

"I won't have to do any writing," the boy replied, cheerfully, "because all of my folks live right in town."—Youngstown Telegram.

Good Reason

The schoolmaster wrote on the back of the boy's monthly report: "A good worker, but talks too much." The father signed the report and wrote under the remarks of the schoolmaster: "You should meet his mother."

Teacher: "What does the prefix 'mag' mean?"

Boy: "Big."

Teacher: "Give me a word containing this prefix and use it in a sentence?"

Boy: "I like magpies!"

In the Geography Class

First Stude: "Tom is certainly dumb. He thinks Hindenburg is a town in Austria."

Second Stude: "I should say he is! But, what country is it in?"

Was He Right?

A small boy slapped a little girl and the teacher rebuked him.

"John," she said, "no gentleman would strike a lady."

John's reply was immediate: "Well, I guess no lady would stick out her tongue at a gentleman."

Wasted Energy

Professor—Can you give me an example of wasted energy?

Freshman—Yes, sir; telling a hair-raising story to a bald-headed man.—Brooklyn Eagle.

Degrees

A young man at college named Freeze

Weighted down by M.A.'s and A.B.'s

Collapsed from the strain.

Said his doctor, "'Tis plain

You are killing yourself by degrees."

—Stanford Chaparral.

The Children Do It All

Mrs. Susan M. Dorsey, formerly superintendent of the Los Angeles city schools, holds that some teachers do not appreciate how much work is done by the superintendent of a school system. They remind her of a small boy who asked his father: "Dad, do teachers get paid?"

"Certainly," said the father, "why shouldn't they?"

"Well," said the boy, "I don't see why they do—the children must do all the work!"

The Proposal

He had proposed to her, as is still the custom with some people, and her answer had been "No, NO!" Can you imagine, then, why he crushed her exultantly to his manly breast and then rushed off to buy the license? Well, it's very simple: They were both English teachers and so knew very well that two negatives make an affirmative.—Georgia Yellow Jacket.

Most Suitable

Headmaster: "Oh, and would you like your son to learn the dead languages?"

Mr. Barmy: "Certainly. He's going to be an undertaker."

An absent-minded professor was deep in his work when his wife called to him. "Quick father, the baby drank all the ink in the bottle. What shall we do?"

"Oh, just write with a lead pencil," was his reply.

Obviously

"Why was the period between A. D. 500 and A. D. 1200 known as the dark Ages?" asked the teacher.

"Because those were the days of knights," replied a bright child.

A professor, coming to one of his classes a little late, found a most uncomplimentary caricature of himself drawn on the board. Turning to the student nearest him, he angrily inquired:

"Do you know who is responsible for that atrocity?"

"No, sir, I don't," replied the student, "but I strongly suspect his parents."

Often Overlooked

The lesson was about "Jonah," and the teacher wished to emphasize the fact that Jonah's disobedience caused discomfort to all on the ship.

"Jonah suffered for his disobedience, but who else had to suffer because the prophet sinned?" he asked.

"Please, sir, the whale," replied one boy.—Manchester Guardian.

Also Marks

Visitor: "Johnny, do you get good marks at school?"

Johnny: "Yes, but I can't show them!"

Newton's Theory

Teacher—What great law is Newton credited with discovering?

The Class (in unison)—The bigger they are the harder they fall.—Carnegie Puppet.



Professor: "And what's the steak like to-day?"

Butcher: "Tender as a woman's heart, sir."

Professor: "Ah, in that case I think I'll have half a pound of sausages."—Punch.

Commercial College Student (who has proposed and been accepted): "Goodnight, dear. Directly I reach home I'll write you a letter confirming our conversation of this evening."

Those Old Ragged Schoolbooks of Mine

On a library shelf, pushed away by themselves, Are some volumes, thin, dusty, and old, Which are kept half concealed, for they're not there for show.

And in markets would long stand unsold; They have been there for years, seldom opened or read,

With leaves tied together with twine, And seem to have outlived all honor and worth, Those old ragged schoolbooks of mine.

Time was when they answered their purpose full well,

They met the demands of the day, They fed the ambition of faltering youth

And turned some stray thoughts the right way; They were arbiters often in schoolboy disputes,

And cited was many a line, As we proved the world better or worse by such means

As those old ragged schoolbooks of mine.

Each page was immaculate when it was new, But pencils and pens were at hand

And amateur artists imprinted designs Original far more than grand;

And scribbles from mid-leaf to cover disclosed How nonsense and sense could combine

To form freakish mixtures of maxims and rules In those old ragged schoolbooks of mine.

Many names, here and there, in those books may be found

Which also on tombstones appear, And memory brings back a face or a voice

Which forces a smile or a tear; And back through a vista of commonplace years, From the slopes of life's gentle decline

The past seems more sacred when viewed through the aid

Of those old ragged schoolbooks of mine.

When Schoolmasters Advertised

Schoolmasters did not always hold to the high professional ethics which they are now expected to observe in all their actions and public relations.

The following advertisement was published in an English newspaper of the Eighteenth Century by one Roger Giles who certainly was a man of parts.

ROGER GILES

Surgink Parish Clark and Schulemaster Groser and Hundertaker

Respectably informs ladys and gentlemen that he drors teef without waiting a minit, applies laches every hour, blisters on the lowest farms, and vizicks for a penny a peace.

He sells Godsfathers kordales, kuts korns, bunyons, docters hosses, clips donkies wance a month, and undertakes to look after everybody's nayles by the ear.

Joesharps, penny wissels, brass kanelsticks, fryin' pans, and other moosical histruments hat greatly reydooced figers.

Young ladies and gentlement larnes their grammur, and langedge in the purtiest mannar, also grate care taken off their morrels and spelling.

Also zarm singing, tayloring base vial, and all other sorts of fancy work, squadrils, poker, weazels, and all country dances tort at home and abroad, at perfeksun.

Perfumery and snuff in all its branches. As times is cruel bad I beg to tell ee that i has just begunned to sell all sorts of stashonery, ware, cox, hens, voulds, pigs, and all other kind of poultry, blackin-brishes, herrings, coles, scrubbin-brishes, traykel, and godley bukes and bibles, mise-traps, brisk-dist, whisker seeds, morrel pokkerankechers, and all sorts of swatemaits including taters, sassages, and other garden stuff, bakky, zizars, lamp oyle, tay kittles, and other intoxzikating likkers, a dale of fruit, hats, zongs, hair oyle, pattins, bukkits, grindin' stones and other aitables, korne and bunyon zalve, and all hardware, I aslaid in a large assortment of troye, dogs mate, lolipops, ginger beer, matches, and other pikkles, such as hepson salts, hoysters, Winsor sope, anzetrar—Old rags bort and sold here and nowhere else, new laid eggs by me Roger Giles; zinging burdes keepled, such as howles, donkies, paykox, lobsters, crickets, also a stock of celebrated brayder.

P. S.—I taylores geography, ritmitmetic, cowsticks, jimnastics, and other chynees tricks.

His Great Sacrifice

The teacher had explained to the class that by making some little sacrifice at home, they might be able to contribute a small sum for some poor children.

When she had finished she asked Little Mary what she would do without a time.

"Teacher, I'll do without sugar and candy."

"That's noble of you, Mary. Johnny Bates, what will you deprive yourself of?"

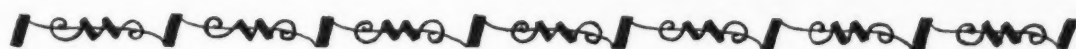
Johnny got on his feet, but thought for a moment. "Please, teacher, I'll do without soap."



these schools
think of ~



REMINGTON NOISELESS



"Typewriter classes taught in the same room with classes in accountancy and shorthand without disturbance."

"Stencil cutting and carbon work improved 100%."

"A more thorough typewriting course taught easier and quicker."

"An improvement for pupil and teacher alike."

{ *These are a few of many testimonials received from schools
who use REMINGTON NOISELESS TYPEWRITERS.* }

Operating without sound, with effortless action, fast and accurate, the REMINGTON NOISELESS is the new machine of business. It should be in every school where pride is taken in up-to-date equipment. Demonstration arranged without obligation. Call the Remington Rand man . . . today.

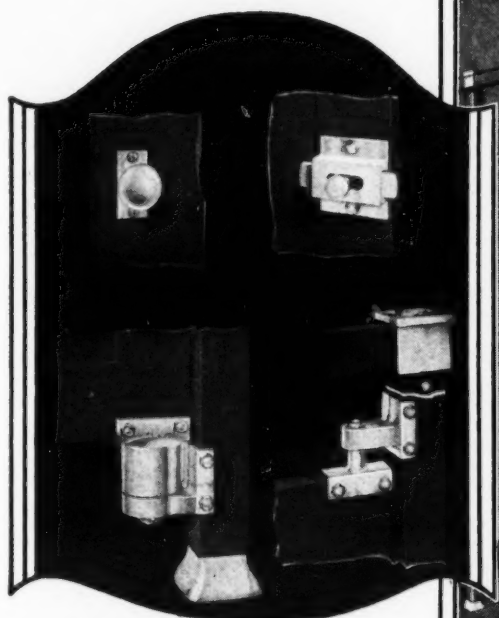
Remington Typewriter Division

Remington Rand Business Service Inc.

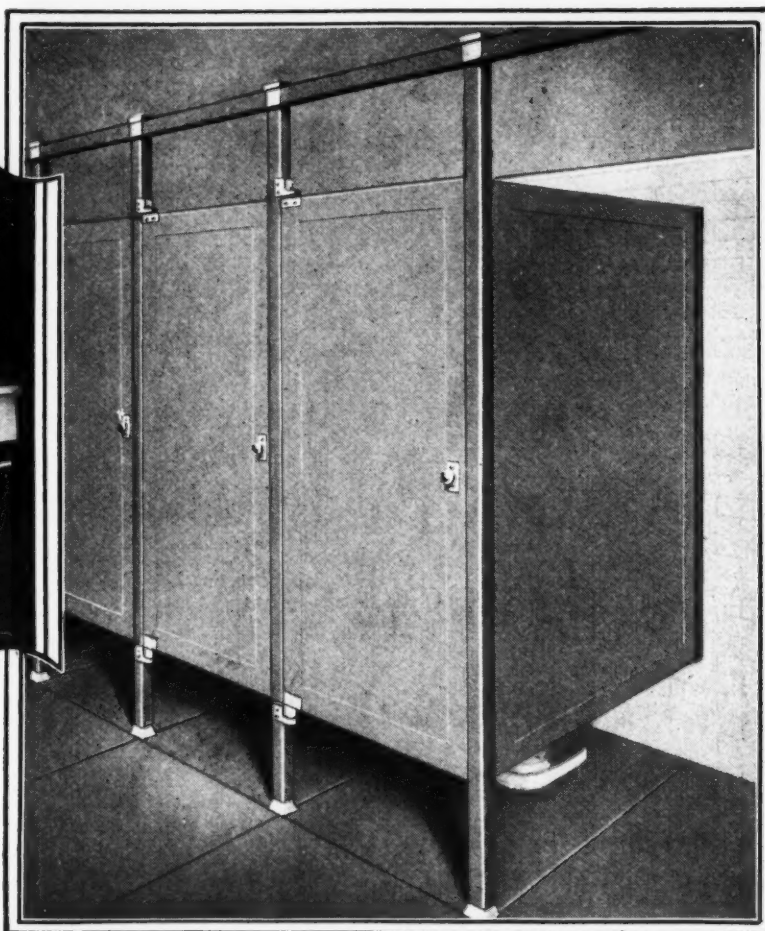
Buffalo, N. Y.

Sales Offices in all Principal Cities





We believe the new Marblmetal hardware is the finest ever put on toilet partitions. The new Marblmetal hinge has been operated by a testing device to equal ten years' service without perceptible wear and it is safe to say that our hinges will last a lifetime. All Marblmetal hardware is chromium plated. Ask to see a sample of this wonderful new partition.



A Toilet Partition for the Finest Buildings

MARBLMETAL is a toilet partition that in design, construction, equipment and appearance immediately disassociates itself from the crowd. There is nothing that compares with Marblmetal. It has no equal.

The panel is $\frac{3}{4}$ " thick insulated with a special material. A knuckle-knock sounds like marble. Instead of a monotonous flat surface there is a continuous $2\frac{1}{2}$ " stile around doors and panels giving just the right contrast for beauty. The stile is interlocked with outside sheets, re-inforced at each corner, solidly welded across the mitre, ground down and filled.

What a toilet partition Marblmetal is! Beautiful, durable, easy to keep clean. Will not absorb odors. A quality product in every detail but quantity production makes the price surprisingly attractive.

THE MILLS COMPANY

A Mills Metal Partition for Every Purpose
905 Wayside Road ... Cleveland, Ohio
REPRESENTATIVES IN ALL PRINCIPAL CITIES

!
Send for folder
which illustrates
and describes
Marblmetal and
contains complete
specifications.

MARBLMETAL

A letter from the purchasing agent of the Milwaukee Public Library

ONLIWON TOILET PAPER ONLIWON TOILET PAPER ONLIWON TOILET PAPER ONLIWON TOILET PAPER

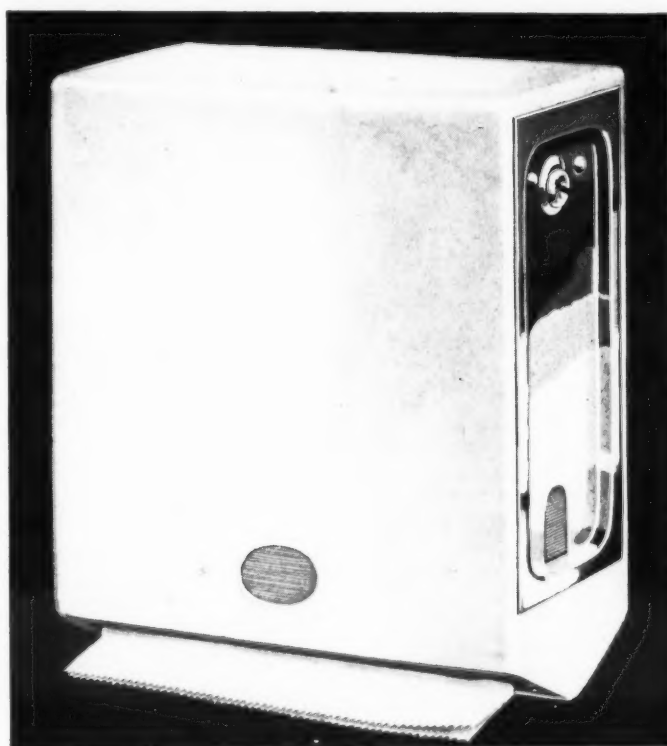
N. F. BRADY writes: "We finally 'fell for' trying folded toilet paper other than Onliwon on the basis of lower first cost. *Never again.* Not only did we substantiate all your claims but also the test that we made in 1922, which showed a saving of the difference between 478 2000-sheet rolls and 338 packages of 1000-sheet Onliwon. By buying A. P. W. Onliwon we found we could show an additional saving. This is due in part to the fact that many of our people have been with us for years and, like the writer, believe that the better the sheet the less expensive it is."

Onliwon can materially reduce the toilet paper item in *your* budget.

Onliwon tissue is approved by physicians because it is smooth, efficient and strong. This efficiency is not only an important health factor—it is further assurance of economy.

What the unique Onliwon cabinets mean

A. P. W. Onliwon cabinets are designed to dispense two sheets, only, at a time. They *work*. Rolls or ordinary flat sheets are illogical for your purpose. They encourage waste; they are often carried away even before they are put into the fixture. Onliwon cabinets save labor because they



*Onliwon toilet paper cabinet in solid white porcelain.
Nickel silver door with lock to prevent theft of paper.*

are quickly, readily filled. The indicator shows contents at a glance.

Inferior service, often put up with on the basis of "cost," records show is invariably more expensive. Let us give you further information as applied to your specific field. Just mail the coupon.

THE ORIGINAL
ONLIWON
TOILET PAPER AND
PAPER TOWEL SERVICE

Please mail this coupon

A. P. W. PAPER CO., Albany, N. Y.

We are interested in the story of Onliwon Toilet Paper. Without obligation to us, send us further data.

Name

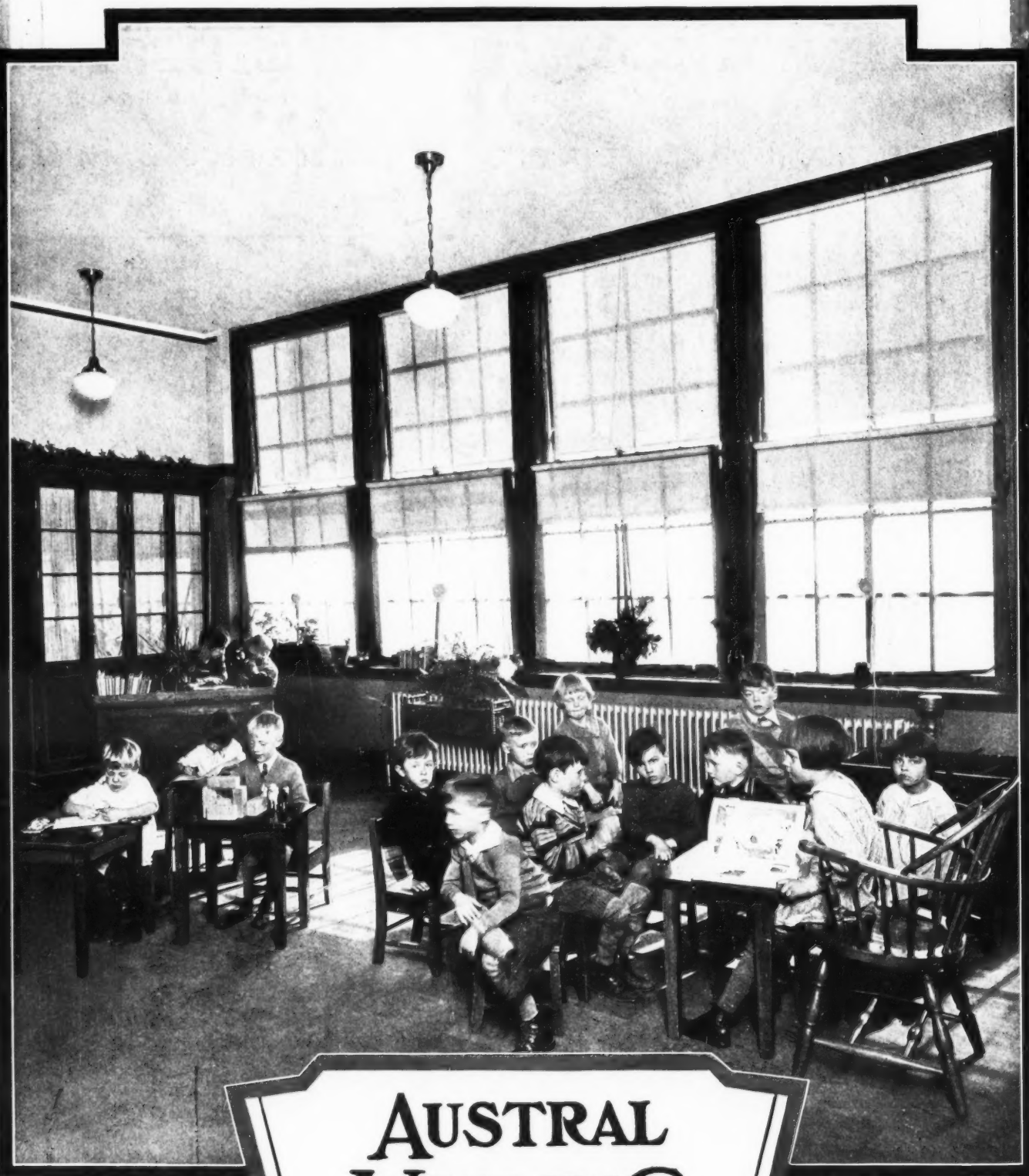
Address

City

ASJ-4



School Architects were among the first to recognize the superior advantages of **AUSTRAL WINDOWS**. They have consistently specified them as a **STANDARD**. More Light Area . . . Perfect Ventilation . . . Economy.



Showing AUSTRAL WINDOWS installed in a Kindergarten. Despite the fact that these windows appear to be closed, they are open from 12 to 15 inches at the center.

**AUSTRAL
WINDOW CO.**
101 PARK AVENUE
NEW YORK

The openings at the center of the AUSTRAL WINDOWS deflect the incoming air up into the center of the room, giving perfect ventilation with no danger of draft.